Council Regulation (EC) No 423/2007 of 19 April 2007 concerning restrictive measures against Iran (repealed)

COUNCIL REGULATION (EC) No 423/2007

of 19 April 2007

concerning restrictive measures against Iran (repealed)

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Articles 60 and 301 thereof,

Having regard to Council Common Position 2007/140/CFSP of 27 February 2007 concerning restrictive measures against Iran⁽¹⁾,

Having regard to the proposal from the Commission,

Whereas:

- (1) On 23 December 2006, the United Nations Security Council adopted Resolution 1737 (2006) (UNSCR 1737 (2006)) deciding that Iran should without further delay suspend all enrichment-related and reprocessing activities, as well as work on all heavy water-related projects, and take certain steps required by the International Atomic Energy Agency (IAEA) Board of Governors, which the United Nations Security Council deems essential to build confidence in the exclusively peaceful purpose of Iran's nuclear programme. In order to persuade Iran to comply with this mandatory decision, the United Nations Security Council decided that all Member States of the United Nations should apply a number of restrictive measures.
- (2) In line with UNSCR 1737 (2006), Common Position 2007/140/CFSP provides for certain restrictive measures against Iran. These measures include restrictions on exports and imports of goods and technology which could contribute to Iran's enrichment-related, reprocessing, or heavy water-related activities, or to the development of nuclear weapon delivery systems, a ban on the provision of related services, a ban on investment related to such goods and technology, a ban on procurement of relevant goods and technology from Iran, as well as the freezing of funds and economic resources of persons, entities and bodies engaged in, directly associated with or providing support for such activities or development.
- (3) These measures fall within the scope of the Treaty establishing the European Community and, therefore, notably with a view to ensuring their uniform application by economic operators in all Member States, Community legislation is necessary in order to implement them as far as the Community is concerned.
- (4) This Regulation derogates from existing Community legislation that provides for general rules on exports to, and imports from, third countries, and in particular from Council Regulation (EC) No 1334/2000 of 22 June 2000 setting up a Community regime

for the control of exports of dual-use items and technology⁽²⁾, in so far as this Regulation covers the same goods and technology.

- (5) For reasons of expediency, the Commission should be empowered to publish the list of banned goods and technology and any amendments to it that will be adopted by the Sanctions Committee or the United Nations Security Council, and to amend the lists of persons, entities and bodies whose funds and economic resources should be frozen on the basis of decisions reached by the United Nations Security Council or by the Sanctions Committee.
- (6) As regards the procedure for establishing and amending the list referred to in Article 7(2) of this Regulation, the Council should exercise the corresponding implementing powers itself in view of the objectives of UNSCR 1737 (2006), notably to constrain Iran's development of sensitive technologies in support of its nuclear and missile programmes, and the proliferation-sensitive nature of the activities undertaken by the persons and entities supporting these programmes.
- (7) Member States should determine the penalties applicable to infringements of the provisions of this Regulation. The penalties provided for should be proportionate, effective and dissuasive.
- (8) In order to ensure that the measures provided for in this Regulation are effective, the latter should enter into force on the day of its publication,

HAS ADOPTED THIS REGULATION:

Article 1

For the purposes of this Regulation only, the following definitions shall apply:

- (a) 'Sanctions Committee' means the Committee of the United Nations Security Council which was established pursuant to paragraph 18 of UNSCR 1737 (2006);
- (b) 'technical assistance' means any technical support related to repairs, development, manufacture, assembly, testing, maintenance, or any other technical service, and may take forms such as instruction, advice, training, transmission of working knowledge or skills or consulting services; including verbal forms of assistance;
- (c) the term 'goods' includes items, materials and equipment;
- (d) the term 'technology' includes software;
- (e) 'investment' means acquisition or extension of a participation in enterprises, including the acquisition in full of such enterprises and the acquisition of shares and securities of a participating nature;
- (f) 'brokering services' means activities of persons, entities and partnerships acting as intermediaries by buying, selling or arranging the transfer of goods and technology, or negotiating or arranging transactions that involve the transfer of goods or technology;
- (g) 'funds' means financial assets and benefits of every kind, including but not limited to:
 - (i) cash, cheques, claims on money, drafts, money orders and other payment instruments;

- (ii) deposits with financial institutions or other entities, balances on accounts, debts and debt obligations;
- (iii) publicly- and privately-traded securities and debt instruments, including stocks and shares, certificates representing securities, bonds, notes, warrants, debentures and derivatives contracts;
- (iv) interest, dividends or other income on or value accruing from or generated by assets;
- (v) credit, right of set-off, guarantees, performance bonds or other financial commitments;
- (vi) letters of credit, bills of lading, bills of sale; and
- (vii) documents showing evidence of an interest in funds or financial resources;
- (h) 'freezing of funds' means preventing any moving, transfer, alteration, use of, access to, or dealing with funds in any way that would result in any change in their volume, amount, location, ownership, possession, character, destination or other change that would enable the funds to be used, including portfolio management;
- (i) 'economic resources' means assets of every kind, whether tangible or intangible, movable or immovable, which are not funds but which may be used to obtain funds, goods or services;
- (j) 'freezing of economic resources' means preventing the use of economic resources to obtain funds, goods or services in any way, including, but not limited to, by selling, hiring or mortgaging them;
- (k) 'territory of the Community' means the territories of the Member States to which the Treaty is applicable, under the conditions laid down in the Treaty, including their airspace[^{F1};]
- (l) [^{F2} contract or transaction' means any transaction of whatever form and whatever the applicable law, whether comprising one or more contracts or similar obligations made between the same or different parties; for this purpose 'contract' includes a bond, guarantee or indemnity, particularly a financial guarantee or financial indemnity, and credit, whether legally independent or not, as well as any related provision arising under, or in connection with, the transaction;
- (m) 'claim' means any claim for indemnity or any other claim of this type, such as a claim for compensation or a claim under a guarantee, notably any claim for extension or payment of a bond, guarantee or indemnity, particularly a financial guarantee or financial indemnity, of whatever form;
- (n) 'person, entity or body in Iran' means:
 - (i) the State of Iran or any public authority thereof;
 - (ii) any natural person in, or resident in, Iran;
 - (iii) any legal person, entity or body having its registered office in Iran;
 - (iv) any legal person, entity or body controlled directly or indirectly by one or more of the above mentioned persons or bodies.]

Textual Amendments

- **F1** Substituted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- **F2** Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 2

[^{F3}1.] It shall be prohibited:

- a to sell, supply, transfer or export, directly or indirectly, the following goods and technology, whether or not originating in the Community, to any natural or legal person, entity or body in, or for use in, Iran:
 - (i) all goods and technology contained in the Nuclear Suppliers Group and Missile Technology Control Regime lists. These goods and technology are listed in Annex I;
 - (ii) other goods and technology determined by the Sanctions Committee or the United Nations Security Council as goods and technology which could contribute to Iran's enrichment-related, reprocessing, or heavy water-related activities, or to the development of nuclear weapon delivery systems. These goods and technology are also listed in Annex I;
 - (iii) [^{F2}certain other goods and technology that could contribute to enrichmentrelated, reprocessing or heavy-water-related activities, to the development of nuclear weapon delivery systems, or to the pursuit of activities related to other topics about which the IAEA has expressed concerns or identified as outstanding. These goods and technology are listed in Annex IA;]
- b to participate, knowingly and intentionally, in activities the object or effect of which is to circumvent the prohibition referred to in point (a).

[^{F3}2 Annex I shall not include goods and technology included in the Common Military List of the European Union⁽³⁾.]

Textual Amendments

- **F2** Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- **F3** Inserted by Council Regulation (EC) No 618/2007 of 5 June 2007 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 3

1 A prior authorisation shall be required for the sale, supply, transfer or export, directly or indirectly, of the goods and technology listed in Annex II, whether or not originating in the Community, to any natural or legal person, entity or body in, or for use in, Iran.

[^{F4}1a For all exports for which an authorisation is required under this Regulation, such authorisation shall be granted by the competent authorities of the Member State where the exporter is established and shall be in accordance with the detailed rules laid down in Article 11 of Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control

of exports, transfer, brokering and transit of dual-use items⁽⁴⁾. The authorisation shall be valid throughout the Union.]

2 Annex II shall include any goods and technology other than those included in Annex I, which could contribute to enrichment-related, reprocessing or heavy water-related activities, to the development of nuclear weapon delivery systems, or to the pursuit of activities related to other topics about which the International Atomic Energy Agency (IAEA) has expressed concerns or identified as outstanding.

3 Exporters shall supply the competent authorities with all relevant information required for their application for an export authorisation.

4 The competent authorities of the Member States, as indicated in the websites listed in Annex III, shall not grant any authorisation for any sale, supply, transfer or export of the goods or technology included in Annex II, if they determine that the sale, supply, transfer or export thereof would contribute to one of the following activities:

- a Iran's enrichment-related, reprocessing or heavy water-related activities;
- b the development of nuclear weapon delivery systems by Iran; or
- c the pursuit by Iran of activities related to other topics about which the IAEA has expressed concerns or identified as outstanding.

5 Under the conditions set out in paragraph 4, the competent authorities of the Member States, as indicated in the websites listed in Annex III, may annul, suspend, modify or revoke an export authorisation which they have already granted.

6 Where they refuse to grant an authorisation, or annul, suspend, substantially limit or revoke an authorisation in accordance with paragraph 4, the Member States shall notify the other Member States and the Commission thereof and share the relevant information with them, while complying with the provisions concerning the confidentiality of such information of Council Regulation (EC) No 515/97 of 13 March 1997 on mutual assistance between the administrative authorities of the Member States and cooperation between the latter and the Commission to ensure the correct application of the law on customs and agricultural matters⁽⁵⁾.

7 Before a Member State grants an export authorisation which has been denied by another Member State or States, in accordance with paragraph 4, for an essentially identical transaction and for which the denial is still valid, it will first consult the Member State or States which issued the denial as provided for in paragraphs 5 and 6. If, following such consultations, the Member State concerned decides to grant an authorisation, it shall inform the other Member States and the Commission thereof, providing all relevant information to explain the decision.

Textual Amendments

F4 Substituted by Council Regulation (EU) No 1228/2009 of 15 December 2009 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 4

[^{F1}It shall be prohibited to purchase, import or transport the goods and technology listed in Annexes I and IA from Iran, whether the item concerned originates in Iran or not.]

Textual Amendments

F1 Substituted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

[^{F2}Article 4a

In order to prevent the transfer of goods and technology that are listed in Annexes I and IA, cargo aircraft and merchant vessels owned or operated by Iran Air Cargo and Islamic Republic of Iran Shipping Line shall be required to submit pre-arrival or pre-departure information, for all goods brought into or out of the Community, to the competent customs authorities of the Member State concerned.

The rules governing the obligation to provide pre-arrival and pre-departure information, in particular time limits to be respected and data to be required, shall be as laid down in the applicable provisions concerning entry and exit summary declarations as well as customs declarations in Regulation (EC) No 648/2005 of the European Parliament and of the Council of 13 April 2005 amending Council Regulation (EC) No 2913/92 establishing the Community Customs Code⁽⁶⁾ and in Commission Regulation (EC) No 1875/2006 of 18 December 2006 amending Regulation (EEC) No 2454/93 laying down provisions for the implementation of Regulation (EEC) No 2913/92⁽⁷⁾.

In addition, Iran Air Cargo and Islamic Republic of Iran Shipping Line and or their representatives shall declare whether the goods are covered by Regulation (EC) No 1334/2000 or by this Regulation and, if their export is subject to authorisation, specify the particulars of the export licence granted.

[^{F5}Until 31 December 2010, the entry and exit summary declarations and the required additional elements referred to in this Article may be submitted in written form using commercial, port or transport information, provided that they contain the necessary particulars.

As from 1 January 2011, the required additional elements referred to in this Article shall be submitted either in written form or using the entry and exit summary declarations as appropriate.]]

Textual Amendments

- F2 Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- **F5** Substituted by Council Regulation (EC) No 680/2009 of 27 July 2009 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 5

[^{F1}1 It shall be prohibited:

- a to provide, directly or indirectly, technical assistance related to the goods and technology listed in the Common Military List of the European Union, or related to the provision, manufacture, maintenance and use of goods included in that list, to any natural or legal person, entity or body in, or for use in, Iran;
- b to provide, directly or indirectly, technical assistance or brokering services related to the goods and technology listed in Annexed I and IA, or related to the provision,

manufacture, maintenance and use of goods listed in Annexes I and IA, to any natural or legal person, entity or body in, or for use in, Iran;

- c to provide investment to enterprises in Iran engaged in the manufacture of goods and technology listed in the Common Military List of the European Union or in Annexes I and IA;
- d to provide, directly or indirectly, financing or financial assistance related to the goods and technology listed in the Common Military List of the European Union or in Annexes I and IA, including in particular grants, loans and export credit insurance, for any sale, supply, transfer or export of such items, or for any provision of related technical assistance to any natural or legal person, entity or body in, or for use in, Iran;
- e to participate, knowingly and intentionally, in activities, the object or effect of which is to circumvent the prohibitions referred to in points (a) to (d).]
- 2 The provision of:
 - a technical assistance, or brokering services related to, goods and technology listed in Annex II and to the provision, manufacture, maintenance and use of these items, directly or indirectly to any person, entity or body in, or for use in Iran;
 - b investment to enterprises in Iran engaged in the manufacture of goods and technology as listed in Annex II;
 - c financing or financial assistance related to goods and technologies referred to in Annex II, including in particular grants, loans and export credit insurance, for any sale, supply, transfer or export of these items, or for any provision of related technical assistance, directly or indirectly, to any person, entity or body in, or for use in Iran;

shall be subject to an authorisation of the competent authority of the Member State concerned.

3 The competent authorities of the Member States, as indicated in the websites listed in Annex III, shall not grant any authorisation for the transactions referred to in paragraph 2, if they determine that the action were to contribute to one of the following activities:

- a Iran's enrichment-related, reprocessing or heavy water-related activities;
- b the development of nuclear weapon delivery systems by Iran; or
- c the pursuit by Iran of activities related to other topics about which the IAEA has expressed concerns or identified as outstanding.

Textual Amendments

F1 Substituted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 6

The competent authorities of the Member States, as indicated in the websites listed in Annex III, may grant, under such terms and conditions as they deem appropriate, an authorisation for a transaction in relation to goods and technology, assistance, investment or brokering services referred to in Articles 2 or 5(1), where the Sanctions Committee has determined in advance and on a case-by-case basis that the transaction would clearly contribute neither to the development of technologies in support of Iran's proliferation sensitive nuclear activities, nor to the development of nuclear weapon development delivery systems, including where such goods and technology, assistance, investment or brokering services are for food, agricultural, medical or other humanitarian purposes, provided that:

- (a) the contract for delivery of the goods or technology, or for the provision of assistance, includes appropriate end-user guarantees, and
- (b) Iran has undertaken not to use the goods or technology concerned, or if applicable, the assistance concerned, in proliferation sensitive nuclear activities or for development of nuclear weapon delivery systems.

Article 7

[^{F1}1 All funds and economic resources belonging to, owned, held or controlled by the persons, entities and bodies listed in Annex IV shall be frozen. Annex IV shall include the persons, entities and bodies designated by the United Nations Security Council or by the Sanctions Committee in accordance with paragraph 12 of United Nations Security Council Resolution 1737 (2006) and paragraph 7 of United Nations Security Council Resolution 1803 (2008).]

2 All funds and economic resources belonging to, owned, held or controlled by the persons, entities and bodies listed in Annex V shall be frozen. Annex V shall include natural and legal persons, entities and bodies, not covered by Annex IV, who, in accordance with Article 5(1)(b) of Common Position 2007/140/CFSP, have been identified as:

- a being engaged in, directly associated with, or providing support for, Iran's proliferationsensitive nuclear activities, or
- b being engaged in, directly associated with, or providing support for, Iran's development of nuclear weapon delivery systems, or
- c acting on behalf of or at the direction of a person, entity or body referred to under (a) or (b), or
- d being a legal person, entity or body owned or controlled by a person, entity or body referred to under (a) or (b), including through illicit means.

3 No funds or economic resources shall be made available, directly or indirectly, to or for the benefit of the natural or legal persons, entities or bodies listed in Annexes IV and V.

4 The participation, knowingly and intentionally, in activities the object or effect of which is, directly or indirectly, to circumvent the measures referred to in paragraphs 1, 2 and 3 shall be prohibited.

Textual Amendments

F1 Substituted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 8

By way of derogation from Article 7, the competent authorities of the Member States, as indicated in the websites listed in Annex III, may authorise the release of certain frozen funds or economic resources, if the following conditions are met:

(a) [^{F6}the funds or economic resources are the subject of a judicial, administrative or arbitral lien established before the date on which the person, entity or body referred to in Article 7 has been designated by the Sanctions Committee, the Security Council or by the Council or of a judicial, administrative or arbitral judgment rendered prior to that date;]

- (b) the funds or economic resources will be used exclusively to satisfy claims secured by such a lien or recognised as valid in such a judgment, within the limits set by applicable laws and regulations governing the rights of persons having such claims;
- (c) the lien or judgment is not for the benefit of a person, entity or body listed in Annex IV or V;
- (d) recognising that the lien or judgment is not contrary to public policy in the Member State concerned; and
- (e) if Article 7(1) applies, the Sanctions Committee has been notified by the Member State of the lien or judgment.

Textual Amendments

F6 Substituted by Council Regulation (EC) No 618/2007 of 5 June 2007 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 9

By way of derogation from Article 7 and provided payment by a person, entity or body listed in Annex IV or V is due under a contract, agreement or obligation that was concluded by, or arose for the person, entity or body concerned, before the date on which that person, entity or body has been designated by the Sanctions Committee, the Security Council or by the Council, the competent authorities of the Member States, as indicated in the websites listed in Annex III, may authorise, under such conditions as they deem appropriate, the release of certain frozen funds or economic resources, if the following conditions are met:

- (a) the competent authority concerned has determined that:
 - (i) the funds or economic resources shall be used for a payment by a person, entity or body listed in Annex IV or V;
 - (ii) the contract, agreement or obligation will not contribute to the manufacture, sale, purchase, transfer, export, import, transport or use of goods and technology listed in Annexes I and II; and
 - (iii) the payment is not in breach of Article 7(3);
- (b) if Article 7(1) applies, the Member State concerned has notified the Sanctions Committee of that determination and its intention to grant an authorisation, and the Sanctions Committee has not objected to that course of action within ten working days of notification; and
- (c) if Article 7(2) applies, the Member State concerned has notified that determination of its competent authority and its intention to grant an authorisation to the other Member States and to the Commission at least two weeks prior to the authorisation.

Article 10

1 By way of derogation from Article 7, the competent authorities of the Member States, as indicated in the websites listed in Annex III, may authorise, under such conditions as they deem appropriate, the release of certain frozen funds or economic resources, or the making available of certain funds or economic resources, if the following conditions are met:

- a the competent authority concerned has determined that the funds or economic resources are:
 - necessary to satisfy the basic needs of persons listed in Annex IV or V, and their dependent family members, including payments for foodstuffs, rent or mortgage, medicines and medical treatment, taxes, insurance premiums, and public utility charges;
 - (ii) intended exclusively for payment of reasonable professional fees and reimbursement of incurred expenses associated with the provision of legal services; or
 - (iii) intended exclusively for payment of fees or service charges for routine holding or maintenance of frozen funds or economic resources; and
- b if the authorisation concerns a person, entity or body listed in Annex IV, the Member State concerned has notified the Sanctions Committee of that determination and its intention to grant an authorisation, and the Sanctions Committee has not objected to that course of action within five working days of notification.

2 By way of derogation from Article 7, the competent authorities of the Member States, as indicated in the websites listed in Annex III, may authorise the release of certain frozen funds or economic resources or the making available of certain funds or economic resources, after having determined that the funds or economic resources are necessary for extraordinary expenses, provided that

- a if the authorisation concerns a person, entity or body listed in Annex IV, the Sanctions Committee has been notified of this determination by the Member State concerned and that the determination has been approved by that Committee, and
- b if the authorisation concerns a person, entity or body listed in Annex V, the competent authority has notified the grounds on which it considers that a specific authorisation should be granted to the other competent authorities of the Member States and to the Commission at least two weeks before the authorisation.

3 The relevant Member State shall inform the other Member States and the Commission of any authorisation granted under paragraphs 1 and 2.

Article 11

1 Article 7(3) shall not prevent financial or credit institutions in the Community from crediting frozen accounts where they receive funds transferred by third parties to the account of a listed natural or legal person, entity or body, provided that any additions to such accounts will also be frozen. The financial or credit institution shall inform the competent authorities about such transactions without delay.

- 2 Article 7(3) shall not apply to the addition to frozen accounts of:
 - a interest or other earnings on those accounts; or
 - [^{F6}b payments due under contracts, agreements or obligations that were concluded or arose before the date on which the person, entity or body referred to in Article 7 has been designated by the Sanctions Committee, the Security Council or by the Council;]

provided that any such interest, other earnings and payments are frozen in accordance with Article 7(1) or 7(2).

Textual Amendments

F6 Substituted by Council Regulation (EC) No 618/2007 of 5 June 2007 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

[^{F2}Article 11a

1 Credit and financial institutions which come within the scope of Article 18 shall, in their activities with credit and financial institutions referred to in paragraph 2, and in order to prevent such activities contributing to proliferation-sensitive nuclear activities or to the development of nuclear weapon delivery systems:

- a exercise continuous vigilance over account activity, particularly through their programmes on customer due diligence and under their obligations relating to money laundering and financing of terrorism;
- b require that in payment instructions all information fields which relate to the originator and beneficiary of the transaction in question be completed and if that information is not supplied, refuse the transaction;
- c maintain all records of transactions for a period of five years and make them available to national authorities on request;
- d if they suspect or have reasonable grounds to suspect that funds are related to proliferation financing, promptly report their suspicions to the financial intelligence unit (FIU) or to another competent authority designated by the Member State concerned, as indicated on the websites listed in Annex III, without prejudice to Articles 5 and 7. The FIU or such other competent authority will serve as a national centre for receiving and analysing suspicious transaction reports regarding potential proliferation financing. The FIU or such other competent authority shall have access, directly or indirectly, on a timely basis to the financial, administrative and law enforcement information that it requires to properly undertake this function, including the analysis of suspicious transaction reports.

2 The measures set out in paragraph 1 shall apply to credit and financial institutions in their activities with:

- a credit and financial institutions domiciled in Iran, in particular with Bank Saderat;
- b branches and subsidiaries, where they come within the scope of Article 18, of credit and financial institutions domiciled in Iran, as listed in Annex VI;
- c branches and subsidiaries, where they do not come within the scope of Article 18, of credit and financial institutions domiciled in Iran, as listed in Annex VI;
- d credit and financial institutions that are neither domiciled in Iran nor come within the scope of Article 18 but are controlled by persons and entities domiciled in Iran, as listed in Annex VI.

Textual Amendments

F2 Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 11b

1 Bank Saderat branches and subsidiaries that come within the scope of Article 18 shall notify the competent authority of the Member State where they are established, as indicated on the websites listed in Annex III, of all transfers of funds carried out or received by them,

the names of the parties, the amount and the date of the transaction, within five working days after carrying out or receiving the transfer of funds concerned. If the information is available, the notification must specify the nature of the transaction and, where appropriate, the nature of the goods covered by the transaction and must, in particular, state whether the goods are covered by Regulation (EC) No 1334/2000 or by this Regulation and, if their export is subject to authorisation, indicate the number of the licence granted.

2 Subject to, and in accordance with, the information-sharing arrangements, the other notified competent authorities shall without delay transmit these data, as necessary, in order to prevent any transaction that could contribute to proliferation-sensitive nuclear activities or to the development of nuclear weapons delivery systems, to the competent authorities of other Member States where the counterparts to such transactions are established.]

F2 Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 12

1 The freezing of funds and economic resources or the refusal to make funds or economic resources available, carried out in good faith on the basis that such action is in accordance with this Regulation, shall not give rise to liability of any kind on the part of the natural or legal person or entity or body implementing it, or its directors or employees, unless it is proved that the funds and economic resources were frozen or withheld as a result of negligence.

 $[^{F1}2$ The prohibitions set out in Article 5(1)(d) and Article 7(3) shall not give rise to liability of any kind on the part of the natural or legal persons or entities concerned, if they did not know, and had no reasonable cause to suspect, that their actions would infringe these prohibitions.]

 $[^{F2}3$ The disclosure in good faith, as provided for in Articles 11a and 11b, by an institution or by a person covered by this Regulation or an employee or director of such an institution, of the information referred to in Articles 11a and 11b shall not involve the institution or person or its directors or employees in liability of any kind.]

Textual Amendments

- **F1** Substituted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- **F2** Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

I^{F^2} Article 12a

1 No claim for indemnity or any other claim of this type, such as a claim for compensation or a claim under a guarantee, notably a claim for extension or payment of a bond, guarantee or indemnity, particularly a financial guarantee or financial indemnity, of whatever form, made by:

- a designated persons, entities or bodies listed in Annexes IV, V and VI;
- b any other person, entity or body in Iran, including the Iranian government;
- c any person, entity or body acting through or on behalf of one of these persons or entities

in connection with any contract or transaction the performance of which would have been affected, directly or indirectly, wholly or in part, by the measures imposed by this Regulation shall be satisfied.

2 The performance of a contract or transaction shall be regarded as having been affected by the measures imposed by this Regulation where the existence or content of the claim results directly or indirectly from those measures.

3 In any proceedings for the enforcement of a claim, the onus of proving that satisfying the claim is not prohibited by paragraph 1 shall be on the person seeking the enforcement of that claim.]

Textual Amendments

F2 Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 13

1 Without prejudice to the applicable rules concerning reporting, confidentiality and professional secrecy, natural and legal persons, entities and bodies shall:

- a supply immediately any information which would facilitate compliance with this Regulation, such as accounts and amounts frozen in accordance with Article 7, to the competent authorities of the Member States, as indicated in the websites listed in Annex III, where they are resident or located, and shall transmit such information, directly or through the Member States, to the Commission;
- b cooperate with the competent authorities, as indicated in the websites listed in Annex III, in any verification of this information.

2 Any additional information directly received by the Commission shall be made available to the Member State concerned.

3 Any information provided or received in accordance with this Article shall be used only for the purposes for which it was provided or received.

Article 14

The Commission and Member States shall immediately inform each other of the measures taken under this Regulation and shall supply each other with any other relevant information at their disposal in connection with this Regulation, in particular information in respect of violations and enforcement problems and judgments handed down by national courts.

Article 15

[^{F4}1 The Commission shall:

- a amend Annex I on the basis of determinations made by either the United Nations Security Council or the Sanctions Committee;
- b amend Annex IA and Annex II on the basis of information supplied by Member States;
- c amend Annex III on the basis of information supplied by Member States;
- d amend Annex IV on the basis of determinations made by either the United Nations Security Council or the Sanctions Committee;
- e amend Annex VI on the basis of decisions taken in respect of Annexes III and IV to Council Common Position 2007/140/CFSP.]

2 The Council, acting by qualified majority, shall establish, review and amend the list of persons, entities and bodies referred to in Article 7(2) and in full accordance with the determinations made by the Council in respect of Annex II to Common Position 2007/140/ CFSP. The list in Annex V shall be reviewed in regular intervals and at least every 12 months.

3 The Council shall state individual and specific reasons for decisions taken pursuant to paragraph 2 and make them known to the persons, entities and bodies concerned.

Textual Amendments

F4 Substituted by Council Regulation (EU) No 1228/2009 of 15 December 2009 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Article 16

1 Member States shall lay down the rules on penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive.

2 Member States shall notify the Commission of those rules without delay after the entry into force of this Regulation and shall notify it of any subsequent amendment.

Article 17

1 Member States shall designate the competent authorities referred to in this Regulation and identify them in or through the websites as listed in Annex III.

2 Member States shall notify the Commission of their competent authorities without delay after the entry into force of this Regulation and shall notify it of any subsequent amendment.

Article 18

This Regulation shall apply:

- (a) within the territory of the Community;
- (b) on board any aircraft or any vessel under the jurisdiction of a Member State;
- (c) to any person inside or outside the territory of the Community who is a national of a Member State;
- (d) to any legal person, entity or body which is incorporated or constituted under the law of a Member State;
- (e) to any legal person, entity or body in respect of any business done in whole or in part within the Community.

Article 19

This Regulation shall enter into force on the day of its publication in the *Official Journal* of the European Union.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

[^{F7}ANNEX I

Goods and technology referred to in Articles 2, 4 and 5(1)

Textual Amendments

F7 Substituted by Commission Regulation (EC) No 116/2008 of 28 January 2008 amending Council Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

INTRODUCTORY NOTES

Where possible, the items in this Annex are defined by reference to the list of dual-use items set out in Annex I to Council Regulation (EC) No 1334/2000, as amended by Council Regulation (EC) No 1183/2007⁽⁸⁾.

The descriptions of the items in this Annex are often, but not always, identical or similar to descriptions of the items set out in the list of dual-use items. Each description is based as much as possible on that of the first dual-use item referred to. Where there are differences between the two descriptions, the description of the goods or technology found in this Annex shall be decisive. For the sake of clarity, an asterisk indicates that a description is based on the description of the dual-use item referred to, but contains different values for the technical parameters used or omits or adds specific elements.

If only part of the scope of the dual-use item referred to is covered by an entry in this Annex, the reference number taken from the list of dual-use items is preceded by '*ex*'.

For the definitions of terms between 'double quotation marks' please refer to Regulation (EC) No 1183/2007.

This Annex does not include goods and technology (including software) included in the Common Military List of the European Union⁽⁹⁾. In accordance with Article 1(1)(c) of Common Position 2007/140/CFSP⁽¹⁰⁾, the Member States of the European Union will prohibit the direct or indirect supply, sale or transfer of such goods and technology to Iran. General Notes

- 1. For control or prohibition of goods which are designed or modified for military use, see the relevant list(s) of controls or prohibitions on military goods maintained by individual Member States. References in this Annex that state 'See also Military Goods Controls' refer to the same lists.
- 2. The object of the prohibitions contained in this Annex should not be defeated by the export of any non-prohibited goods (including plant) containing one or more prohibited components when the prohibited component or components are the principal element of the goods and can feasibly be removed or used for other purposes.

N.B.: In judging whether the prohibited component or components are to be considered the principal element, it is necessary to weigh the factors of quantity, value and technological knowhow involved and other special circumstances which might establish the prohibited component or components as the principal element of the goods being procured.

3. Goods specified in this Annex include both new and used goods. Nuclear Technology Note (NTN)

(To be read in conjunction with Section I.0.B.)

Status: Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

The sale, supply, transfer or export of 'technology' directly associated with any goods whose sale, supply, transfer or export is prohibited in Section I.0.A is prohibited according to the provisions of Category I.0.

'Technology' for the 'development', 'production' or 'use' of goods under prohibition remains under prohibition even when applicable to non-prohibited goods.

The approval of goods for export granted in accordance with Article 6 of Regulation (EC) No 423/2007, also authorizes the export to the same end-user of the minimum 'technology' required for the installation, operation, maintenance and repair of the goods.

Prohibitions on 'technology' transfer do not apply to information 'in the public domain' or to 'basic scientific research'.

General Technology Note (GTN)

(To be read in conjunction with Sections I.1B, I.2B, I.3B, I.4B, I.5B, I.6B, I.7B and I.9B.)

The sale, supply, transfer or export of 'technology' which is 'required' for the 'development', 'production' or 'use' of goods whose sale, supply, transfer or export is prohibited in Categories I.1 to I.9, is prohibited according to the provisions of Categories I.1 to I.9.

'Technology' required' for the 'development', 'production' or 'use' of goods under prohibition remains under prohibition even when applicable to non-prohibited goods.

Prohibitions do not apply to that 'technology' which is the minimum necessary for the installation, operation, maintenance (checking) and repair of those goods which are not prohibited or whose export has been authorised in accordance with Regulation (EC) No 423/2007.

Prohibitions on 'technology' transfer do not apply to information 'in the public domain', to 'basic scientific research' or to the minimum necessary information for patent applications. General Software Note (GSN)

(This note overrides any prohibition within sections I.0B, I.1B, I.2B, I.3B, I.4B, I.5B, I.6B, I.7B and I.9B.)

Categories I.0 to I.9 of this list do not prohibit 'software' which is either:

- a. Generally available to the public by being:
 - 1. Sold from stock at retail selling points, without restriction, by means of:
 - a. Over-the-counter transactions;
 - b. Mail order transactions;
 - c. Electronic transactions; or
 - d. Telephone order transactions; and
 - 2. Designed for installation by the user without further substantial support by the supplier; or
- b. 'In the public domain'.

I.0 NUCLEAR MATERIAL, FACILITIES AND EQUIPMENT

I.0A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Descripti	on
I.0A.001	0A001	specially d prepared e	eactors' and lesigned or quipment and ts therefor, as
		a. c s a s	Nuclear reactors' capable of operation o as to maintain controlled self- ustaining fission chain reaction;
		b. M c f t d d f t t c	Metal vessels, or major shop- àbricated parts herefor, specially lesigned or orepared to contain he core of a nuclear reactor', ncluding the eactor vessel head for a reactor oressure vessel;
		c. N e d p ii r	Manipulative equipment specially lesigned or prepared for nserting or emoving fuel in a nuclear reactor';
		s c f f in r c s t t r e. F	Control rods pecially designed or prepared for he control of the ission process n a 'nuclear eactor', support or suspension tructures herefor, rod drive nechanisms and od guide tubes; Pressure tubes
			pecially designed or prepared to

> contain fuel elements and the primary coolant in a 'nuclear reactor' at an operating pressure in excess of 5,1 MPa; f. Zirconium metal and alloys in the form of tubes or assemblies of tubes in which the ratio of hafnium to zirconium is less than 1:500 parts by weight, specially designed or prepared for use in a 'nuclear reactor'; Coolant pumps g. specially designed or prepared for circulating the primary coolant of 'nuclear reactors'; h. 'Nuclear reactor internals' specially designed or prepared for use in a 'nuclear reactor', including support columns for the core, fuel channels, thermal shields, baffles, core grid plates, and diffuser plates; Note: In I.0A.001.h. *'nuclear reactor* internals' means any major structure within a reactor vessel which has one or more functions such as supporting the core, maintaining fuel alignment, directing primary coolant flow, providing radiation shields for the reactor vessel,

		i. Heat exc (steam g specially or prepar use in the coolant of 'nuclear j. Neutron and meas instrume specially or prepar determin flux leve the core 'nuclear	changers enerators) designed red for e primary circuit of a reactor'; detection suring nts designed red for ling neutron els within of a reactor'.
I.0A.002	<i>ex</i> 0B001* (0B001.a, 0B001.b.1-13, 0B001.c, 0B001.g 0B001.h 0B001.i and 0B001.j)	of 'natur	Il uranium', ' and terials', gned or nt and for, as ecially l for ng isotopes al ', 'depleted ', and fissile

	separation
	plant;
6.	Atomic
	vapour
	'laser'
	isotope
	separation
	(AVLIS)
7	plant; Malaaular
7.	Molecular
	'laser'
	isotope
	separation
	(MLIS)
	plant;
8.	Plasma
	separation
	plant;
9.	Electro
<i>)</i> .	magnetic
	separation
	plant;
Casaant	
Gas cent	
and asser	
and com	
	designed
or prepar	
gas centr	rifuge
separatio	n process,
as follow	/S:
Note: In	I.0A.002.b.
'high str	ength-
to-densit	-
material	
any of th	
following	
<i>v</i> c	Maraging
а.	steel
	~
	capable
	of an
	ultimate
	tensile
	strength
	of 2 050
	MPa or
	more;
b.	Aluminium
	alloys
	capable
	of an
	ultimate
	tensile
	strength of

		460 MPa
		or more;
		or
	с.	'Fibrous
		or
		filamentary
		materials'
		with a
		'specific
		modulus '
		of more
		than 3,18
		$\times 10^{6}$
		m and a
		'specific
		tensile
		strength'
		greater
		than 76,2
		$\times 10^{3} m;$
	1.	Gas
		centrifuges;
	2.	Complete
		rotor
	_	assemblies;
	3.	Rotor tube
		cylinders
		with
		a wall
		thickness
		of 12 mm
		or less, a
		diameter
		of h strugger
		between 75 mm
		and 400
		mm, made
		from 'high
		strength-
		to-density
		ratio
		materials';
	4.	Rings or
		bellows
		with
		a wall
		thickness
		of 3 mm
		or less and
		a diameter
		of
I		

between 75 mm and 400 mm and designed to give local support to a rotor tube or to join a number together, made from 'high strengthto-density ratio materials'; 5. Baffles of between 75 mm and 400 mm diameter for mounting inside a rotor tube, made from 'high strengthto-density ratio materials'; 6. Top or bottom caps of between 75 mm and 400 mm diameter to fit the ends of a rotor tube, made from 'high strengthto-density ratio materials';

7.	Magnetic suspension bearings consisting of an annular magnet suspended within a housing made of or protected by 'materials resistant to corrosion by UF ₆ ' containing a damping medium and having the magnet
	coupling with a
	pole piece or second magnet
	fitted to the top cap of the
8.	rotor; Specially
	prepared bearings comprising a pivot-
	cup assembly mounted
9.	on a damper; Molecular
9.	pumps comprised of
	cylinders having internally machined or extruded
	helical

grooves and internally machined bores; 10. Ringshaped motor stators for multiphase AC hysteresis (or reluctance) motors for synchronous operation within a vacuum in the frequency range of 600 to 2 000 Hz and a power range of 50 to 1 000 Volt-Amps; 11. Centrifuge housing/ recipients to contain the rotor tube assembly of a gas centrifuge, consisting of a rigid cylinder of wall thickness up to 30 mm with precision machined ends and made of or protected by 'materials

		resistant	
		corrosio	
	10	by UF_6	,
	12.	Scoops	
		consistir	ıg
		of tubes	
		of up to 12 mm	
		internal	
		diameter	r
		for the	L
		extractio	on
		of UF ₆	
		gas from	ı
		within a	
		centrifug	ge
		rotor	
		tube by	
		Pitot tub)e
		action,	
		made of	
		protecte	a
		by 'materia	10
		resistant	
		corrosio	
		by UF ₆ '	
	13.	Frequen	
		changers	
		(convert	
		or	
		inverters	
		specially	
		designed	1
		or	1
		prepared to supply	
		motor	y
		stators	
		for gas	
		centrifug	ge
		enrichm	ent,
		having	
		all of the	
		followin	
		characte	ristics,
		and	
		specially	
		designed	
		componetter therefor:	
		a.	Multiphase
			output
I			· ···r ···

	of
	600
	to
	2
	000
	Hz;
b.	Frequency
0.	control
	better
	than
	0,1
	%;
с.	Harmonic
	distortion
	of
	less
	than
	2
	%;
	and
d.	An
	efficiency
	greater
	than
	80
	%;
Equipment and	
components,	
specially designed	
or prepared for	
gaseous diffusion	
separation process	,
as follows:	
1. Gaseous	
diffusion	
barriers made of	
porous	
metallic,	
polymer	
or ceram	ic
'material	
resistant	
corrosior	ı
by UF ₆ '	
with a	
pore size	
of 10 to	
100 nm,	
thickness	5
of 5 mm	
or less,	
and, for	

2.	tubular forms, a diameter of 25 mm or less; Gaseous diffuser housings made of or protected by 'materials
3.	resistant to corrosion by UF ₆ '; Compressors (positive displacement, centrifugal and axial flow
	types) or gas blowers with a suction volume capacity
	of 1 m ³ / min or more of UF ₆ , and discharge pressure up to 666,7 kPa,
4.	made of or protected by 'materials resistant to corrosion by UF ₆ '; Rotary
	shaft seals for compressors or blowers specified in I.0A.002.c.3. and

5.	designed for a buffer gas in-leakage rate of less than 1 000 cm ³ /min.; Heat exchangers made of aluminium, copper, nickel, or combinations of aluys containing more than 60 per cent nickel, or combinations of these metals as clad tubes, designed to operate at sub- atmospheric pressure with a leak rate that limits the pressure rise to less than 10 Pa per hour under a pressure differential of 100 kPa; Bellow valves made of or protected by 'materials resistant to corrosion by UF ₆ ',

> to 1 500 mm; Equipment and components, specially designed or prepared for aerodynamic separation process, as follows: 1. Separation nozzles consisting of slitshaped, curved channels having a radius of curvature less than 1 mm, resistant to corrosion by UF₆, and having a knife-edge contained within the nozzle which separates the gas flowing through the nozzle into two streams; 2. Tangential inlet flowdriven cylindrical or conical tubes, (vortex tubes), made of or protected by 'materials resistant to corrosion by UF₆'

with a diameter of between $0.5 \, \text{cm}$ and 4 cm and a length to diameter ratio of 20:1 or less and with one or more tangential inlets; 3. Compressors (positive displacement, centrifugal and axial flow types) or gas blowers with a suction volume capacity of $2 \text{ m}^3/$ min or more, made of or protected by 'materials resistant to corrosion by UF_6 ', and rotary shaft seals therefor; 4. Heat exchangers made of or protected by 'materials resistant to corrosion by UF_6 ';

1	5.	Aerodynamic
	5.	
		separation
		element
		housings,
		made of or
		protected
		÷
		by
		'materials
		resistant to
		corrosion
		by UF ₆ '
		to contain
		vortex
		tubes or
		separation
		nozzles;
	6.	Bellows
		valves
		made of or
		protected
		by
		'materials
		resistant to
		corrosion
		by UF ₆ ',
		with a
		diameter
		of 40 to 1
		500 mm;
	7.	Process
		systems
		for
		separating
		UF ₆ from
		carrier gas
		(hydrogen
		or helium)
		to 1 ppm
		UF ₆
		content
		or less,
		including:
		a. Cryogenic
		heat
		exchangers
		and
		cryoseparators
		capable
		of
		temperatures
		of
		153
I		

b.	K (- 120 °C) or less; Cryogenic refrigeration units capable of temperatures of 153
c.	K (- 120 °C) or less; Separation nozzle or vortex tube units for
d.	the separation of UF_6 from carrier gas; UF_6 cold traps capable of temperatures of 253 K (-
Equipment and components, specially designed or prepared for chemical exchange	20 °C) or less;

1	separatio	n process,
	as follows:	
	1.	Fast-
	1.	
		exchange
		liquid-
		liquid
		pulse
		columns
		with stage
		residence
		time of 30
		seconds or
		less and
		resistant to
		concentrated
		hydrochloric
		acid (e.g.
		made of or
		protected
		by suitable
		plastic
		materials
		such as
		fluorocarbon
		polymers
	2	or glass);
	2.	Fast-
		exchange
		liquid-
		liquid
		centrifugal
		contactors
		with stage
		residence
		time of 30
		seconds or
		less and
		resistant to
		concentrated
		hydrochloric
		acid (e.g.
		made of or
		protected
		by suitable
		plastic
		materials
		such as
		fluorocarbon
		polymers
		or glass);
	3.	Electrochemical
	. .	reduction
		cells
		00115

4.	resistant to concentrated hydrochloric acid solutions, for reduction of uranium from one valence state to another; Electrochemical reduction cells feed equipment to take U^{+4} from the organic stream and, for those parts in contact with the process stream, made of or protected by suitable materials (e.g. glass, fluorocarbon polymers, polyphenyl sulphate, polyether sulfone and resin- impregnated graphite); Feed preparation systems for
	for producing high purity uranium chloride solution consisting
	-

of dissolution, solvent extraction and/or ion exchange equipment for purification and electrolytic cells for reducing the uranium U⁺⁶ or U⁺⁴ to U^{+3} ; Uranium 6. oxidation systems for oxidation of U^{+3} to U^{+4} : Equipment and components, specially designed or prepared for ionexchange separation process, as follows: 1. Fast reacting ionexchange resins, pellicular or porous macroreticulated resins in which the active chemical exchange groups are limited to a coating on the surface of an inactive porous support

structure, and other composite structures in any suitable form, including particles or fibres, with diameters of 0,2 mm or less, resistant to concentrated hydrochloric acid and designed to have an exchange rate half time of less than 10 seconds and capable of operating at temperatures in the range of 373 K (100 °C) to 473 K (200 °C); ionexchange columns (cylindrical) with a diameter greater than 1 000 mm, made of or protected by materials resistant to concentrated hydrochloric

2.

acid (e.g. titanium or fluorocarbon plastics) and capable of operating at temperatures in the range of 373 K (100 °C) to 473 K (200 °C) and pressures above 0,7 MPa; 3. ionexchange reflux systems (chemical or electrochemical oxidation or reduction systems) for regeneration of the chemical reducing or oxidizing agents used in ionexchange enrichment cascades; Equipment and components, specially designed or prepared for atomic vapour 'laser' isotope separation process (AVLIS), as follows:

1.	High power strip or scanning electron beam guns with a delivered power of more than 2,5 kW/ cm for use in uranium vaporization systems; Liquid
2.	
	equipment for the crucibles;

N.B.: See	
I.2A.002	
3.	Product
	and tails
	collector
	systems
	made of or
	lined with
	materials
	resistant
	to the
	heat and
	corrosion
	of
	uranium
	metal
	vapour
	or liquid,
	such as
	yttria-
	coated
	graphite or
_	tantalum;
4.	Separator
	module
	housings
	(cylindrical
	or
	rectangular
	vessels)
	for
	containing
	the
	uranium
	metal
	vapour
	source, the
	electron
	beam gun
	and the
	product
	and tails
_	collectors;
5.	'Lasers'
	or 'laser'
	systems
	for the
	separation
	of .
	uranium
	isotopes
	with a
	spectrum

frequency stabiliser for operation over extended periods of time; N.B.: See also I.6A.001 and I.6A.008. Equipment and components, specially designed or prepared for molecular 'laser' isotope separation process (MLIS) or chemical reaction by isotope selective laser activation (CRISLA), as follows: 1. Supersonic expansion nozzles for cooling mixtures of UF₆ and carrier gas to 150 К (– 123 $^{\circ}C)$ or less and made from 'materials resistant to corrosion by UF_6 '; 2. Uranium pentafluoride (UF_5) product collectors consisting of filter, impact, or cyclone type collectors or combinations

	thereof,	
	and	
	made of	
	'materials	
	resistant to	
	corrosion	0
	by UF ₅ /	
	UF ₆ ';	
3.	Compress	
	made of o	r
	protected	
	by	
	'materials	
	resistant to	0
	corrosion	
	by UF_6 ',	
	and rotary	
	shaft seals	5
	therefor;	
4.	Equipmen	nt
	for	
	fluorinatin	ng
	UF_5	
	(solid) to	
	UF_6 (gas)	;
5.	Process	
	systems	
	for	
	separating	5
	UF_6 from	
	carrier	
	gas (e.g.	
	nitrogen	
	or argon)	
	including:	
	a.	Cryogenic
]	heat
		exchangers
	:	and
	(cryoseparators
	(capable
	(of
	1	temperatures
		of
		153
		K
		(-
		120
	(°C)
		or
]	less;

		b. c.	Cryogenic refrigeration units capable of temperatures of 153 K (- 120 °C) or less; UF ₆ cold traps capable of temperatures of 253 K (- 20 °C) or
	6.	'Lasers'	less;
	0.	or 'laser'	
		systems	
		for the	
		separatio	n
		of .	
		uranium	
		isotopes with a	
		spectrum	l
		frequenc	
		stabiliser	
		for	
		operation over	1
		extended	
		periods o	of
	N.B.: See	time;	
	N.B.: See I.6A.001		
	I.6A.008		
	Equipme		
	compone		
	or prepar	designed ed for	
I	or propu	vu 101	

I	plasma s	eparation
		as follows:
	1.	Microwave
	1.	power
		sources
		and
		antennae
		for
		producing or
		accelerating
		ions, with
		an output
		frequency
		greater
		than 30
		GHz and
		mean
		power
		output
		greater
		than 50
		kW;
	2.	radio-
		frequency
		ion
		excitation
		coils for
		frequencies
		of more
		than 100 kHz and
		capable of
		handling
		more than
		40 kW
		mean
		power;
	3.	Uranium
		plasma
		generation
		systems;
	4.	Liquid
		metal
		handling
		systems
		for molten
		uranium
		or .
		uranium
		alloys,
		consisting of
I		01

crucibles, made of or protected by suitable corrosion and heat resistant materials (e.g. tantalum, yttriacoated graphite, graphite coated with other rare earth oxides or mixtures thereof), and cooling equipment for the crucibles; N.B.: See also I.2A.002. 5. Product and tails collectors made of or protected by materials resistant to the heat and corrosion of uranium vapour such as yttriacoated graphite or tantalum; 6. Separator module housings (cylindrical) for containing the

> uranium plasma source, radiofrequency drive coil and the product and tails collectors and made of a suitable nonmagnetic material (e.g. stainless steel); Equipment and components, specially designed or prepared for electromagnetic separation process, as follows: Ion sources, single or multiple, consisting of a vapour source, ioniser, and beam accelerator made of suitable nonmagnetic materials (e.g. graphite, stainless steel, or copper) and capable of providing a total ion beam current of

1.

50 mA or greater; 2. Ion collector plates for collection of enriched or depleted uranium ion beams, consisting of two or more slits and pockets and made of suitable nonmagnetic materials (e.g. graphite or stainless steel); 3. Vacuum housings for uranium electromagnetic separators made of nonmagnetic materials (e.g. stainless steel) and designed to operate at pressures of 0,1 Pa or lower; 4. Magnet pole pieces with a diameter greater than 2 m;

I	E	Hich	
	5.	High	
		voltage	
		power supplies	
		for ion	
		sources,	
		having	
		all of the	
		following	
		character	
		a.	Capable
			of
			continuous
			operation;
		b.	Output
			voltage
			of
			20
			000
			V
			or greater:
		c.	greater; Output
		C.	current
			of
			1
			A
			or
			greater;
			and
		d.	Voltage
			regulation
			of
			better
			than
			0,01 %
			over
			a
			period
			of
			8
			hours;
	N.B.: Se		
	I.3A.006		
	6.	Magnet	
		power	
		supplies (high	
		(high power,	
		direct	
		current)	
		having	
I			

		b. b. N.B.: See also I.3A.005.	stics: Capable of continuous operation with current output of 500 A or greater at voltage of 00 V or greater; and Current or voltage egulation oetter han 0,01 % over a beriod of 3 nours.
I.0A.003	0B002	Specially designed or prepared auxiliary systems, equipment and components, as follows, for isotope separation plant specified in I.0A.002, made of or protected by 'materials resistant to corrosion by UF ₆ ': a. Feed autoclaves, ovens or systems	

		used for UF_6 to the	
			ent process;
	b.	Desublin	
	0.	or cold tr	
		used to re	* ·
		UF_6 from	
			ent process
		for subse	
		transfer u	*
		heating;	ipon
	c.	Product a	and
	U .	tails stati	
		transferri	
		into cont	-
	d.	Liquefac	· · · · · · · · · · · · · · · · · · ·
	u.	solidifica	
		stations u	
		remove U	
		the enric	
		process b	
		compress	-
		cooling a	
			ng UF ₆ to a
			solid form;
	e.		stems and
	С.	header sy	
			designed
		for handl	
		within ga	-
			, centrifuge
		or aerody	
		cascades	
	f.	1.	Vacuum
	-•		manifolds
			or vacuum
			headers
			having a
			suction
			capacity
			of 5 $m^3/$
			minute or
			more; or
		2.	Vacuum
			pumps
			specially
			designed
			for use
			in UF ₆
			bearing
			atmospheres;
I			

		g.	sources s designed prepared on-line s feed, pro tails from streams	heters/ion specially l or l for taking amples of oduct or n UF ₆ gas and having e following
I.0A.004	0B003	of uraniu specially	Systems conversi uranium concentr UO ₃ ; Systems conversi to UF ₆ ; Systems	ersion uipment l or as follows: for the on of ore ates to for the on of UO ₃

	Status: Point in time view a		Document Generated: 2023-12-16
	s to legislation: There are currently needed. egulation (EC) No 423/2007 (repealed.		
	ogunanion (20) 110 720,2007 (repeared	a). (See end of 2 ceanent	
		d.	Systems for the conversion of UO_2 to UF_4 ;
		e.	Systems for the conversion of UF_4 to UF_6 ;
		f.	Systems for the conversion of UF_4 to uranium metal;
		g.	Systems for the conversion of UF_6 to UO_2 ;
		h.	Systems for the conversion of UF_6 to UF_4 ;
		i.	Systems for the conversion of UO_2 to UCl_4 .
I.0A.005	0B004	concer deuter compo design equipr	for the production or ntration of heavy water, ium and deuterium bunds and specially ed or prepared nent and components or, as follows: Plant for the production of heavy water, deuterium or deuterium compounds, as follows: 1. Water- hydrogen sulphide exchange plants; 2. Ammonia- hydrogen exchange plants; Equipment and components, as follows: 1. Water- hydrogen exchange plants; I. Water- hydrogen exchange plants; I. Water- hydrogen exchange plants; Equipment and components, as follows:

steel (e.g. ASTM A516) with diameters of 6 m to 9 m, capable of operating at pressures greater than or equal to 2 MPa and with a corrosion allowance of 6 mm or greater; Single stage, low head (i.e. 0,2 MPa) centrifugal blowers or compressors for hydrogen sulphide gas circulation (i.e. gas containing more than 70 % H₂S) with a throughput capacity greater than or equal to 56 m^{3} second when operating at pressures greater than or equal to 1,8 MPa suction

2.

3.	and having seals designed for wet H_2S service; Ammonia- hydrogen exchange towers greater than or equal to 35 m in height with diameters
4.	diameters of 1,5 m to 2,5 m capable of operating at pressures greater than 15 MPa; Tower internals, including stage contactors, and stage pumps, including those which are submersible,
5.	for heavy water production utilizing the ammonia- hydrogen exchange process; Ammonia crackers with operating pressures greater

6.	than or equal to 3 MPa for heavy water production utilizing the ammonia- hydrogen exchange process; Infrared absorption analysers capable of on-line hydrogen/ deuterium ratio analysis where deuterium
7.	deuterium concentrations are equal to or greater than 90 %; Catalytic burners for the conversion of enriched deuterium gas into heavy
8.	water utilizing the ammonia- hydrogen exchange process; Complete heavy water upgrade systems, or columns therefor, for the

		upgrade of heavy water to reactor- grade deuterium concentration.
I.0A.006	0B005	Plant specially designed for the fabrication of 'nuclear reactor' fuel elements and specially designed or prepared equipment therefor.Note: A plant for the fabrication of 'nuclear reactor' fuel elements includes equipment which: a.a.Normally comes into direct contact with or directly processes or controls the production flow of nuclear materials;b.Seals the nuclear materials within the cladding; c.c.Checks the integrity of the cladding or
I.0A.007	0B006	Plant for the reprocessing of irradiated 'nuclear reactor' fuel elements, and specially designed or prepared equipment and components therefor:Note: I.0A.007 includes: a.a.Plant for the reprocessing of irradiated 'nuclear reactor' fuel elements including equipment and components which normally come into direct contact with and directly control the irradiated fuel and the major nuclear material

	and fission product
	processing streams;
b.	Fuel element
0.	chopping or
	shredding
	6
	machines, i.e.
	remotely operated
	equipment to cut,
	chop, shred or
	shear irradiated
	'nuclear reactor'
	fuel assemblies,
	bundles or rods;
с.	Dissolvers,
	critically safe
	tanks (e.g. small
	diameter, annular
	or slab tanks)
	specially designed
	or prepared for
	the dissolution of
	irradiated 'nuclear
	reactor' fuel, which
	are capable of
	withstanding hot,
	highly corrosive
	liquids, and
	which can be
	remotely loaded and
	maintained;
d.	Counter-current
u.	solvent extractors
	and ion-exchange
	processing
	equipment specially
	designed or
	prepared for use
	in a plant for
	the reprocessing
	of irradiated
	[°] natural uranium',
	'depleted uranium'
	or 'special fissile
	materials';
e.	Holding or storage
U.	
	vessels specially
	designed to be
	critically safe and
	resistant to the
	corrosive effects of
	nitric acid;
	Note: Holding or
	storage vessels may
1	- /

		have the following
		features:
		1. Walls or
		internal
		structures
		with a
		boron
		equivalent
		(calculated
		for all
		constituent
		elements
		as defined
		in the
		note to
		I.0A.012)
		of at least
		two per
		cent;
		2. <i>A</i>
		maximum
		diameter
		of 175
		mm for
		cylindrical
		vessels; or
		3. A
		maximum
		width of
		75 mm for
		either a
		slab or
		annular
		vessel.
		f. Process control
		instrumentation
		specially designed
		or prepared for
		monitoring or
		controlling the
		reprocessing of
		irradiated 'natural
		uranium', 'depleted
		uranium' or
		'special fissile
		materials'.
.0A.008	0B007	Plant for the conversion of
		plutonium and equipment
		specially designed or
		prepared therefor, as follows:
		a. Systems for the

		plutonium nitrate to oxide;b. Systems for plutonium metal production.
I.0A.009	OC001	 'Natural uranium' or 'depleted uranium' or thorium in the form of metal, alloy, chemical compound or concentrate and any other material containing one or more of the foregoing. Note: 1.04.009 does not prohibit the following: a. Four grammes or less of 'natural uranium' or 'depleted uranium' when contained in a sensing component in instruments; b. 'Depleted uranium' specially fabricated for the following civil non-nuclear applications: Shielding; Packaging; Ballasts having a mass not greater than 100 kg; C. Alloys containing less than 5 %
		less than 5 % thorium; d. Ceramic products containing thorium, which have been manufactured for non-nuclear use.
I.0A.010	0C002	'Special fissile materials'. Note: I.0A.010 does not prohibit four 'effective

I.0A.011	0C003	grammes' or less when contained in a sensing component in instruments. Deuterium, heavy water (deuterium oxide) and other compounds of deuterium, and mixtures and solutions containing deuterium, in which the isotopic ratio of deuterium to hydrogen exceeds 1:5 000.
I.0A.012	0C004	Graphite, nuclear grade, having a purity level of less than 5 parts per million 'boron equivalent' and with a density greater than 1,5 g/ cm ³ . N.B.: See also I.1A.028. Note 1: 1.0A.012 does not prohibit the following: a. Manufactures of graphite having a mass less than 1 kg, other than those specially designed or prepared for use in a nuclear reactor; b. Graphite powder. Note 2: In I.0A.012, 'boron equivalent' (BE) is defined as the sum of BE _z for impurities (excluding BE _{carbon} since carbon is not considered an impurity) including boron, where: BE _z (ppm) = CF × concentration of element Z in ppm; where CF is the conversion factor = and σ_B and σ_Z are the thermal neutron capture cross sections (in barns) for naturally occurring boron and element Z respectively; and A _B and A _Z are the atomic masses of naturally

		occurring boron and element Z respectively.
I.0A.013	0C005	Specially prepared compounds or powders for the manufacture of gaseous diffusion barriers, resistant to corrosion by UF_6 (e.g. nickel or alloy containing 60 weight per cent or more nickel, aluminium oxide and fully fluorinated hydrocarbon polymers), having a purity of 99,9 weight per cent or more and a mean particle size of less than 10 micrometres measured by American Society for Testing and Materials (ASTM) B330 standard and a high degree of particle size uniformity.

I.0B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.0B.001	0D001	'Software' specially designed or modified for the 'development', 'production' or 'use' of goods specified in Section I.0A.
I.0B.002	0E001	'Technology' according to the Nuclear Technology Note for the 'development', 'production' or 'use' of goods specified in Section I.0A.

I.1 MATERIALS, CHEMICALS, 'MICROORGANISMS' AND 'TOXINS'

I.1A

GOODS

No	Relevant item(s) from	Description
	Annex to Regulation (EC)	-
	No 1183/2007	

I.1A.001	1A102	Resaturated pyrolized carbon-carbon components designed for space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005. N.B.: See also Military Goods Controls for components for rockets and missiles.
I.1A.002	1A202	Composite structures in the form of tubes and having both of the following characteristics: N.B.: See also I.9A.011. a. An inside diameter of between 75 mm and 400 mm; and b. Made with any of the 'fibrous or filamentary materials' specified in I.1A.024 or I.1A.034.a. or with carbon prepreg materials specified in I.1A.034.c.
I.1A.003	1A225	Platinized catalysts specially designed or prepared for promoting the hydrogen isotope exchange reaction between hydrogen and water for the recovery of tritium from heavy water or for the production of heavy water.
I.1A.004	1A226	Specialized packings which may be used in separating heavy water from ordinary water, having both of the following characteristics: a. Made of phosphor bronze mesh chemically treated to improve wettability; and b. Designed to be used in vacuum distillation towers.
I.1A.005	1A227	High-density (lead glass or other) radiation shielding

Status: Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		 windows, having all of the following characteristics, and specially designed frames therefor: a. A 'cold area' greater than 0,09 m²; b. A density greater than 3 g/cm³; and c. A thickness of 100 mm or greater. Technical Notes: In I.1A.005 the term 'cold area' means the viewing area of the window exposed to the lowest level of radiation in the design application.
I.1A.006	<i>ex</i> 1B001* (1B001.a, <i>ex</i> 1B001.b and 1B001.c)	Equipment for the production of fibres, prepregs, preforms or 'composites' specified in I.1A.024, as follows, and specially designed components and accessories therefor: N.B.: See also I.1A.007 and I.1A.014. Filament winding machines of which the motions for positioning, wrapping and winding fibres are coordinated and programmed in three or more axes, specially designed for the manufacture of 'composite' structures or laminates from 'fibrous or filamentary materials'; Tape-laying machines of which the motions for positioning and laying tape or sheets are coordinated and programmed in two or more axes, specially designed

		for the manufacture of 'composite' airframe or 'missile' structures; Note: In I.1A.006.b., 'missile' means complete rocket systems and unmanned aerial vehicle systems. Multidirectional, multidimensional weaving machines or interlacing machines, including adapters and modification kits, for weaving, interlacing or braiding fibres to manufacture 'composite' structures; Technical Notes: For the purposes of I.1A.006.c. the technique of interlacing includes knitting. Note: I.1A.006.c. does not prohibit textile machinery not modified for the above end-uses.
I.1A.007	1B101 and <i>ex</i> 1B001.d	Equipment, other than that specified in I.1A.006, for the 'production' of structural composites as follows; and specially designed components and accessories therefor: <i>Note: Components and</i> <i>accessories specified in</i> <i>I.1A.007 include moulds,</i> <i>mandrels, dies, fixtures</i> <i>and tooling for the preform</i> <i>pressing, curing, casting,</i> <i>sintering or bonding of</i> <i>composite structures,</i>

thereo	
a.	Filament winding
	machines of
	which the motions
	for positioning,
	wrapping and
	winding fibres can
	be coordinated
	and programmed
	in three or more
	axes, designed to
	fabricate composite structures
	or laminates
	from fibrous
	or filamentary
	materials, and
	coordinating and
	programming
	controls;
b.	Tape-laying
0.	machines of which
	the motions for
	positioning and
	laying tape and
	sheets can be
	coordinated and
	programmed in
	two or more axes,
	designed for the
	manufacture of
	composite airframe
	and 'missile'
	structures;
c.	Equipment designed
	or modified for
	the 'production'
	of 'fibrous or
	filamentary
	materials' as
	follows:
	1. Equipment
	for
	converting
	polymeric
	fibres
	(such as
	polyacrylonitri
	rayon or
	polycarbosilan
	including
	special

		provision to strain the fibre during heating; 2. Equipment for the vapour deposition of elements or compounds on heated filament substrates;
		3. Equipment for the wet- spinning of refractory ceramics (such as aluminium oxide); d. Equipment designed or modified for special fibre surface treatment or for producing prepregs and preforms specified in entry I.9A.026. Note: I.1A.007.d. includes rollers, tension stretchers, coating equipment, cutting equipment and clicker dies.
I.1A.008	1B102	Metal powder 'production equipment' and components as follows: N.B.: See also I.1A.009.b. a. Metal powder 'production equipment' usable for the 'production', in a controlled environment, of spherical or atomised

		 materials specified in 1.1A.025.a., 1.1A.029.a.1., 1.1A.029.a.2. or in the Military Goods Controls. b. Specially designed components for 'production equipment' specified in 1.1A.008.a. Note: 1.1A.008 includes: a. Plasma generators (high frequency arc-jet) usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment; b. Electroburst equipment usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment; c. Equipment usable for the 'production' of spherical aluminium powders by powdering a melt in an inert medium (e.g. nitrogen).
I.1A.009	1B115	Equipment, other than that specified in I.1A.008, for the production of propellant and propellant constituents, as follows, and specially designed components therefor: a. 'Production equipment' for the 'production', handling or

> acceptance testing of liquid propellants or propellant constituents specified in I.1A.025.a., I.1A.025.b., I.1A.029 or in the Military Goods Controls; 'Production b. equipment' for the 'production', handling, mixing, curing, casting, pressing, machining, extruding or acceptance testing of solid propellants or propellant constituents specified in I.1A.025.a., I.1A.025.b., I.1A.029 or in the Military Goods Controls. Note: I.1A.009.b. does not prohibit batch mixers, continuous mixers or fluid energy mills. For the prohibition of batch mixers, continuous mixers and fluid energy mills see *I.1A.011*, *I.1A.012* and I.1A.013. Note 1: For equipment specially designed for the production of military goods, see the Military Goods Controls. Note 2: I.1A.009 does not prohibit equipment for the *'production', handling and* acceptance testing of boron carbide Specially designed nozzles

for producing pyrolitically

I.1A.010

1B116

Status: Point in time view as at 17/12/2009. Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)		
		derived materials formed on a mould, mandrel or other substrate from precursor gases which decompose in the 1 573 K (1 300 °C) to 3 173 K (2 900 °C) temperature range at pressures of 130 Pa to 20 kPa.
I.1A.011	1B117	Batch mixers with provision for mixing under vacuum in the range of zero to 13,326 kPa and with temperature control capability of the mixing chamber and having all of the following, and specially designed components therefor: a. A total volumetric capacity of 110 litres or more; and b. At least one mixing/ kneading shaft mounted off centre.
I.1A.012	1B118	Continuous mixers with provision for mixing under vacuum in the range of zero to 13,326 kPa and with a temperature control capability of the mixing chamber having any of the following, and specially designed components therefor: a. Two or more mixing/kneading shafts; or b. A single rotating shaft which oscillates and having kneading teeth/pins on the shaft as well as inside the casing of the mixing chamber.
I.1A.013	1B119	Fluid energy mills usable for grinding or milling substances specified in I.1A.025.a., I.1A.025.b., I.1A.029 or in the Military Goods Controls, and

		specially designed components therefore.
I.1A.014	1B201	Filament winding machines, other than those specified in I.1A.006 or I.1A.007, and related equipment, as follows:a.Filament winding machines having all of the following characteristics:1.Having motions for positioning, wrapping, and winding fibres coordinated and programmed in two or more axes;2.Specially designed to fabricate composite structures or laminates from 'fibrous or filamentary materials'; and
		3. Capable of winding cylindrical rotors of diameter between 75 and 400 mm and lengths of 600 mm or greater; b. Coordinating and programming controls for the

<i>Status:</i> Point in time view as at 17/12/2009.	
Changes to legislation: There are currently no known outstanding effects for the	
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)	

		 filament winding machines specified in I.1A.014.a.; c. Precision mandrels for the filament winding machines specified in I.1A.014.a.
I.1A.015	1B225	Electrolytic cells for fluorine production with an output capacity greater than 250 g of fluorine per hour.
I.1A.016	1B226	Electromagnetic isotope separators designed for, or equipped with, single or multiple ion sources capable of providing a total ion beam current of 50 mA or greater. Note: I.1A.016 includes separators: a. Capable of enriching stable isotopes; b. With the ion sources and collectors both in the magnetic field and those configurations in which they are external to the field.
I.1A.017	1B227	Ammonia synthesis converters or ammonia synthesis units, in which the synthesis gas (nitrogen and hydrogen) is withdrawn from an ammonia/hydrogen high- pressure exchange column and the synthesized ammonia is returned to said column
I.1A.018	1B228	 Hydrogen-cryogenic distillation columns having all of the following characteristics: a. Designed for operation with internal temperatures of 35 K (-238 °C) or less; b. Designed for operation at an

		c.	 internal pressure of 0,5 to 5 MPa; Constructed of either: 1. Stainless steel of the 300 series with low sulphur content and with an austeniti ASTM (equivale standard grain siz number of 5 or greater; 2. Equivale materials which are both cryogeni and H₂- compatil and 	c or or ()) ce or ent s ic
		d.	With internal diameters of 1 m of greater and effecti lengths of 5 m or greater.	
I.1A.019	1B229	exchang 'internal follows: <i>N.B.: Fo</i> <i>are spect</i> <i>prepared</i>	ydrogen sulphide e tray columns and contactors', as <i>r columns which</i> <i>ially designed or</i> <i>l for the production</i> <i>water see I.0A.005</i> Water-hydrogen sulphide exchange tray columns, having all of the following characteristics: 1. Can operate a pressure	e at

			2.	of 2 MPa or greater; Constructed of carbon steel having an austenitic ASTM (or equivalent standard) grain size number of 5 or greater; and
			3.	With a diameter of 1,8 m
		b.	for the w hydrogen exchange columns in I.1A.0 Technica 'Internal contactor the colum segmente which ha effective diameter m or grea are desig to facilita countered stainless a carbon of 0,03 % These ma trays, val	a sulphide e tray specified 19.a. 1 Notes: rs' of ans are ed trays ve an assembled of 1,8 ater, ned ate wrrent g and fructed of steels with content 6 or less. ty be sieve ve trays, ap trays, or l trays
I.1A.020	1B230	solutions or dilute catalyst i (KNH ₂ /N	of concerpotassium potassium n liquid an NH ₃), havi	n amide mmonia

		a. b.	than 8,5	ally ty greater m ³ /h; and
		с.	Either of following character 1.	g
			2.	or For dilute potassium amide solutions (less than 1 %), an operating pressure of 20 to 60 MPa.
I.1A.021	1B231		for the pr recovery, concentra handling Equipme tritium fa	refor, as or plants roduction, , extraction, ation, or of tritium;

<i>Status:</i> Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		removal capacity greater than 150 W; 2. Hydrogen isotope storage or purification systems using metal hydrides as the storage or purification metal
I.1A.022	1B232	Turboexpanders or turboexpander-compressor sets having both of the following characteristics: a. Designed for operation with an outlet temperature of 35 K (-238 °C) or less; and b. Designed for a throughput of hydrogen gas of 1 000 kg/h or greater.
I.1A.023	1B233	Lithium isotope separation facilities or plants, and equipment therefor, as follows: a. Facilities or plants for the separation of lithium isotopes; b. Equipment for the separation of lithium isotopes, as follows: 1. Packed liquid- liquid exchange columns specially designed for lithium amalgams; 2. Mercury or lithium

	Status: Point in time view as tes to legislation: There are currently no Regulation (EC) No 423/2007 (repealed	known outstanding effects for the
	es to legislation: There are currently no	known outstanding effects for the
I.1A.024		solution.'Fibrous or filamentary materials' which may be used in organic 'matrix', metallic 'matrix' or carbon 'matrix' composite' structures or laminates, as follows:

		Properties for materials described in 1.1A.024.b. should be determined using SACMA recommended methods SRM 12 to 17, or national equivalent tow tests, such as Japanese Industrial Standard JIS- R-7601, Paragraph 6.6.2., and based on lot average.
I.1A.025	1C011.a and 1C011.b	Metals and compounds, as follows: N.B.: See also Military Goods Controls and I.1A.029. a. Metals in particle sizes of less than 60 μm whether spherical, atomised, spheroidal, flaked or ground, manufactured from material consisting of 99 % or more of zirconium, magnesium and alloys of these; Technical Notes: <i>The natural content</i> of hafnium in the zirconium (typically 2 % to 7 %) is counted with the zirconium. Note: The metals or alloys listed in I.1A.025.a. are prohibited whether or not the metals or alloys are encapsulated in aluminium, magnesium, zirconium or beryllium.

	<i>Status:</i> Point in time view a inges to legislation: There are currently no cil Regulation (EC) No 423/2007 (repealed	o known outstanding effects for the
		b. Boron or boron carbide of 85 % purity or higher and a particle size of 60 µm or less; Note: The metals or alloys listed in I.1A.025.b. are prohibited whether or not the metals or alloys are encapsulated in aluminium, magnesium, zirconium or beryllium.
I.1A.026		Materials and devices for reduced observables such as radar reflectivity, ultraviolet/ infrared signatures and acoustic signatures, usable in 'missiles', 'missile' subsystems or unmanned aerial vehicles specified in I.9A.003. Note 1: I.1A.026 includes: a.a.Structural materials and coatings specially designed for reduced radar reflectivity;b.Coatings, including paints, specially designed for reduced or tailored reflectivity or emissivity in the microwave, infrared or ultra violet regions of the electromagnetic specially used for the thermal control of satellites. Technical Notes: In I.1A.026 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.1A.027	1C102	Resaturated pyrolized carbon-carbon materials designed for space launch vehicles specified in I.9A.001

	Status: Point in time view as at 17/12/20 ges to legislation: There are currently no known outs Regulation (EC) No 423/2007 (repealed). (See end o	standing effects for the
		or sounding rockets specified in I.9A.005. N.B.: See also Military Goods Controls for materials for rockets and missiles.
I.1A.028	ex 1C107* (1C107.a, ex 1C107.b, ex 1C107.c and ex 1C107.d)	Graphite and ceramic materials as follows:Fine grain graphite with a bulk density of 1,72 g/cm³ or greater, measured a 288 K (15 °C), and having a grain size of 100 μm or less, usable for rocket nozzles and re- entry vehicle nose tips, which can be machined to any of the following products:1.Cylinders having a diameter of 120 mm or greater, and a length of 50 mm or greater, 2.2.Tubes

		N.B.: See also I.OA.012. Pyrolytic or fibrous reinforced graphites, usable for rocket nozzles and reentry vehicle nose tips usable in 'missiles'; N.B.: See also I.OA.012. Ceramic composite materials (dielectric constant less than 6 at any frequency from 100 MHz to 100 GHz) for use in radomes usable in 'missiles'; Bulk machinable silicon-carbide reinforced unfired ceramic, usable for nose tips usable for 'missiles'.
I.1A.029	ex 1C111* (1C111.a.1-3, 1C111.a.4, 1C111.b.1-4 and 1C111.c)	Propellants and constituent chemicals for propellants, other than those specified in I.1A.025, as follows: Propulsive substances: 1. Spherical aluminium powder, other than that specified in the Military Goods Controls, with particles of uniform diameter of less than 200 µm and an aluminium content of 97 % by weight or

more, if at least 10 % of the total weight is made up of particles of less than 63 µm, according to ISO 2591:1988 or national equivalents; Technical Notes: A particle size of 63 µm (ÍSO *R-565*) corresponds to 250 mesh (Tyler) or 230 mesh (ASTM standard E-11). Metal fuels, other than that specified in the Military Goods Controls, in particle sizes of less than 60 µm, whether spherical, atomized, spheroidal, flaked or ground, consisting 97 % by weight or more of

2.

	any of th	ie
	followin	
	a.	Zirconium;
	b.	Beryllium;
	C.	Magnesium;
		or
	d.	Alloys
		of
		the
		metals
		specified
		by
		(a)
		to
		(c)
		above;
	Technica	
	Notes:	11
	The	
	natural	C
	content o	<i>of</i>
	hafnium	
	in the	
	zirconiur	
	(typicall	V
	2 % to	
	7 %) is	
	counted	
	with the	
	zirconiui	n.
3.	Oxidiser	
	substanc	
	usable	•••
	in liquid	
	propella	nt
	rocket	110
		22
	engines a	as
	follows:	D' '
	a.	Dinitrogen
	1	trioxide;
	b.	Nitrogen
		dioxide/
		dinitrogen
		tetroxide;
	C.	Dinitrogen
		pentoxide;
	d.	Mixed
		Oxides
		of
		Nitrogen
		(MON);
	Technica	
	Notes:	**
I	110105.	

Mixed Oxides of Nitrogen (MON) are solutions of Nitric Oxide (NO) in Dinitrogen Tetroxide/ Nitrogen Dioxide $(N_2O_4/$ NO_2) that can be used in missile systems. There are a range of compositions that can be denoted as MONi or MONij, where i and j are integers representing the percentage of Nitric Oxide in the mixture (e.g., MON3 contains 3 % Nitric Oxide, MON25 25 % Nitric Oxide. An upper limit is MON40, 40 % by weight). N.B.: See Military Goods

	Controls		
	for		
	Inhibited		
	Red		
	Fuming		
	Nitric		
	Acid		
	(IRFNA),	:	
	N.B.: See	2	
	Military		
	Goods		
	Controls		
	and		
	I.1A.049		
	for		
	Сотроиг	nds	
	compose		
	of fluorin		
	and one		
	or more		
	of other		
	halogens	, ,	
	oxygen o		
	nitrogen;		
4.	Hydrazin		
	derivativ		
	as follow	vs:	
	a.	trimethylhydrazine;	
	b.	tetramethylhydrazine;	
	c.	Ν,	
		Ν	
		diallylhydrazine;	
	d.	allylhydrazine;	
	e.	ethylene	
		dihydrazine;	
	f.	monomethylhydrazine	
		dinitrate;	
	g.	unsymmetrical	
	-	dimethylhydrazine	
		nitrate;	
	h.	hydrazinium	
		azide;	
	i.	dimethylhydrazinium	
		azide;	
		N.B.:	
		See	
		Military	
		Goods	
		Controls	
		for	
		Hydrazinium	
		nitrate;	

	k.	diimido
		oxalic
		acid
		dihydrazine;
	1.	2-
	1.	hydroxyethylhydrazine
		nitrate
		(HEHN);
		N.B.:
		See
		Military
		Goods
		Controls
		for
		Hydrazinium
		perchlorate;
	n	hydrazinium
	n.	diperchlorate;
	0	methylhydrazine
	0.	nitrate
		(MHN);
	n	diethylhydrazine
	p.	nitrate
	~	(DEHN);
	q.	1,4- dihudrozina
		dihydrazine
		nitrate
Dolumor		(DHTN);
Polymeri substance		
1.	Carboxy terminate	
	polybuta	
2	(CTPB);	
2.	Hydroxy	
	terminate	
	polybuta	
	(HTPB), other	
	than that	
	specified in the	l
	Military Goods	
	Controls	
3.	Polybuta	
5.	•	ulelle-
	acrylic	
	acid	
4	(PBAA)	
4.	Polybuta	ulelle-
	acrylic	
	acid-	

	acrylonit	rile
	(PBAN);	
Other pro	opellant	
additives		
agents:		
	e Military	
Goods C		
for carbo		
decabora	,	
pentabora		
	es thereof	2
2.	Triethyle	
2.	glycol	
	dinitrate	
	(TEGDN	Ŋ.
3.	2-),
5.		anulamina
	(CAS	nenylamine
	119-75-5).
4.), lolethane
4.	trinitrate	lotetilalle
	(TMETN	n
		0
	(CAS	1).
5	3032-55-	
5.	Diethyle	le
	glycol	
	dinitrate	T).
6.	(DEGDN	/ · ·
0.	Ferrocen	
	derivativ	
	as follow	
	N.B.: See	5
	Military Goods	
	Controls	
	for	
	catocene	
	b.	Ethyl
	0	ferrocene;
	C.	Propyl
		ferrocene (CAS
		1273-89-8);
		N.B.:
		See
		Military
		Goods
		Controls
		for
		n-
		butyl
		ferrocene;

	e.	Pentyl
		ferrocene
		(CAS
		1274-00-6);
	f.	Dicyclopentyl
		ferrocene;
	g.	Dicyclohexyl
	0.	ferrocene;
	h.	Diethyl
		ferrocene;
	i.	Dipropyl
		ferrocene;
	j.	Dibutyl
	J.	ferrocene;
	k.	Dihexyl
		ferrocene;
	1.	Acetyl
		ferrocenes;
		N.B.:
		See
		Military
		Goods
		Controls
		for
		ferrocene
		Carboxylic
		acids;
		N.B.:
		See
		Military
		Goods
		Controls
		for
		butacene;
	0.	Other
		ferrocene
		derivatives
		usable
		as
		rocket
		propellant
		burning
		rate
		modifiers,
		other
		than
		those
		specified
		in
		the
		Military
		Goods
		Controls.

Status: Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		Note: For propellants and constituent chemicals for propellants not specified in I.1A.029, see the Military Goods Controls.
I.1A.030	1C116	Maraging steels (steels generally characterised by high nickel, very low carbon content and the use of substitutional elements or precipitates to produce age- hardening) having an ultimate tensile strength of 1 500 MPa or greater, measured at 293 K (20 °C), in the form of sheet, plate or tubing with a wall or plate thickness equal to or less than 5 mm. N.B.: See also I.1A.035.
I.1A.031	ex 1C117*	Tungsten, molybdenum and alloys of these metals in the form of uniform spherical or atomized particles of 500 micrometre diameter or less with a purity of 97 % or greater for fabrication of motor components, usable in 'missiles' (i.e., heat shields, nozzle substrates, nozzle throats and thrust vector control surfaces).
I.1A.032	1C118	Titanium-stabilised duplex stainless steel (Ti-DSS) having all of the following: a.a.Having all of the following characteristics: 1.1.Containing 17,0-23,0 weight percent chromium and 4,5-7,0 weight percent nickel; 2.2.Having a titanium content of greater

		than 0,10
		weight
		percent;
		and
	3.	A ferritic-
	5.	austenitic
		microstructure
		(also
		referred
		to as a
		two-phase
		microstructure)
		of which
		at least 10
		percent is
		austenite
		by volume
		(according
		to ASTM
		E-1181-87
		or national
		equivalents);
_		and
b.	Having a	
	following	
	1.	Ingots
		or bars
		having
		a size of
		100 mm
		or more
		in each
		dimension;
	2.	Sheets
		having a
		width of
		600 mm
		or more
		and a
		thickness
		of 3 mm
		or less; or
	3.	Tubes
		having
		an outer
		diameter
		of 600
		mm or
		more and
		a wall
		thickness
		of 3 mm
		or less.

1A.033	1C202	Alloys as fo	
			luminium alloys
		ha	iving both of
			e following
		ch	aracteristics:
		1.	'Capable
			of' an
			ultimate
			tensile
			strength of
			460 MPa
			or more at
			293 K (20
			°C); and
		2.	In the
		2.	
			form of
			tubes or
			cylindrical
			solid
			forms
			(including
			forgings)
			with an
			outside
			diameter
			of more
			than 75
			mm;
		b. Ti	tanium alloys
			ving both of
			e following
			aracteristics:
		1.	
			of' an
			ultimate
			tensile
			strength of 900 MPa
			or more at
			293 K (20
		~	°C); and
		2.	In the
			form of
			tubes or
			cylindrical
			solid
			forms
			(including
			forgings)
			with an
			outside
			diameter
			UTATICALA

I.

Status: Point in time view as at 17/12/2009. Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details) than 75 mm. Technical Notes: *The phrase alloys 'capable* of' encompasses alloys before or after heat treatment. I.1A.034 1C210 and ex 1C010.a 'Fibrous or filamentary materials' or prepregs, other than those specified in I.1A.024, as follows: Carbon or a. aramid 'fibrous or filamentary materials' having either of the following characteristics: 1. Α 'specific modulus' of 12,7 × 10^6 m or greater; or 2. А 'specific tensile strength' of $235 \times$ $10^{3} \,\mathrm{m}\,\mathrm{or}$ greater; Note: I.1A.034.a. does not prohibit aramid 'fibrous or filamentary materials' having 0,25 percent or more by weight of an ester based fibre surface modifier; b. Glass 'fibrous or filamentary materials' having both of the following characteristics: 1. А 'specific modulus' of 3,18 × $10^{6} \, {\rm m} \, {\rm or}$ greater; and

		 2. A 'specific tensile strength' of 76,2 × 10³ m or greater; c. Thermoset resin impregnated continuous 'yarns', 'rovings', 'tows' or 'tapes' with a width of 15 mm or less (prepregs), made from carbon or glass 'fibrous or filamentary materials' specified in I.1A.024 or I.1A.034.a or .b. Technical Notes: The resin forms the matrix of the composite. Note: In I.1A.034, 'fibrous or filamentary materials' is restricted to continuous 'monofilaments', 'yarns', 'rovings', 'tows' or 'tapes'.
I.1A.035	1C216	Maraging steel, other than that specified in I.1A.030, 'capable of' an ultimate tensile strength of 2 050 MPa or more, at 293 K (20 °C). Note: I.1A.035 does not prohibit forms in which all linear dimensions are 75 mm or less. Technical Notes: The phrase maraging steel 'capable of' encompasses maraging steel before or after heat treatment.
I.1A.036	1C225	Boron enriched in the boron-10 (¹⁰ B) isotope to greater than its natural isotopic abundance, as follows: elemental boron, compounds, mixtures containing boron, manufactures thereof,

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		waste or scrap of any of the foregoing. Note: In I.1A.036 mixtures containing boron include boron loaded materials. Technical Notes: The natural isotopic abundance of boron-10 is approximately 18,5 weight per cent (20 atom per cent).
I.1A.037	1C226	Tungsten, tungsten carbide, and alloys containing more than 90 % tungsten by weight, having both of the following characteristics: a.a.In forms with a hollow cylindrical symmetry (including cylinder segments) with an inside diameter between 100 mm and 300 mm; and b.b.A mass greater than 20 kg.Note: I.1A.037 does not prohibit manufactures specially designed as weights or gamma-ray collimators
I.1A.038	1C227	Calcium having both of the following characteristics: a. Containing less than 1 000 parts per million by weight of metallic impurities other than magnesium; and b. Containing less than 10 parts per million by weight of boron.
I.1A.039	1C228	Magnesium having both of the following characteristics: a. Containing less than 200 parts per million by weight of metallic impurities other than calcium; and

		b. Containing less than 10 parts per million by weight of boron.
I.1A.040	1C229	Bismuth having both of the following characteristics: a. A purity of 99,99 % or greater by weight; and b. Containing less than 10 parts per million by weight of silver.
I.1A.041	1C230	Beryllium metal, alloys containing more than 50 % beryllium by weight, beryllium compounds, manufactures thereof, and waste or scrap of any of the foregoing. Note: I.1A.041 does not prohibit the following: a. Metal windows for X-ray machines, or for bore-hole logging devices; b. Oxide shapes in fabricated or semi- fabricated forms specially designed for electronic component parts or as substrates for electronic circuits; c. Beryl (silicate of beryllium and aluminium) in the form of emeralds or aquamarines.
I.1A.042	1C231	Hafnium metal, alloys containing more than 60 % hafnium by weight, hafnium compounds containing more than 60 % hafnium by weight, manufactures thereof, and waste or scrap of any of the foregoing.
I.1A.043	1C232	Helium-3 (³ He), mixtures containing helium-3, and products or devices containing any of the foregoing.

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		Note: I.1A.043 does not prohibit a product or device containing less than 1 g of helium-3.
I.1A.044	1C233	Lithium enriched in the lithium-6 (⁶ Li) isotope to greater than its natural isotopic abundance, and products or devices containing enriched lithium, as follows: elemental lithium, alloys, compounds, mixtures containing lithium, manufactures thereof, waste or scrap of any of the foregoing. <i>Note: I.1A.044 does not</i> <i>prohibit thermoluminescent</i> <i>dosimeters.</i> Technical Notes: <i>The natural isotopic</i> <i>abundance of lithium-6 is</i> <i>approximately 6,5 weight per</i> <i>cent (7,5 atom per cent).</i>
I.1A.045	1C234	Zirconium with a hafnium content of less than 1 part hafnium to 500 parts zirconium by weight, as follows: metal, alloys containing more than 50 % zirconium by weight, compounds, manufactures thereof, waste or scrap of any of the foregoing. Note: I.1A.045 does not prohibit zirconium in the form of foil having a thickness of 0,10 mm or less.
I.1A.046	1C235	Tritium, tritium compounds, mixtures containing tritium in which the ratio of tritium to hydrogen atoms exceeds 1 part in 1 000, and products or devices containing any of the foregoing. Note: I.1A.046 does not prohibit a product or device containing less than 1,48 × 10^3 GBq (40 Ci) of tritium.

I.1A.047	1C236	 Alpha-emitting radionuclides having an alpha half-life of 10 days or greater but less than 200 years, in the following forms: a. Elemental; b. Compounds having a total alpha activity of 37 GBq/kg (1 Ci/kg) or greater; c. Mixtures having a total alpha activity of 37 GBq/kg (1 Ci/kg) or greater; d. Products or devices containing any of the foregoing. Note: I.1A.047 does not prohibit a product or device containing less than 3,7 GBq (100 millicuries) of alpha activity.
I.1A.048	1C237	Radium-226 (226 Ra), radium-226 alloys, radium-226 compounds, mixtures containing radium-226, manufactures therof, and products or devices containing any of the foregoing. Note: I.1A.048 does not prohibit the following: a. Medical applicators; b. A product or device containing less than 0,37 GBq (10 millicuries) of radium-226.
I.1A.049	1C238	Chlorine trifluoride (ClF ₃).
I.1A.050	1C239	high-explosives, other than those specified in the Military Goods Controls, or substances or mixtures containing more than 2 % by weight thereof, with a crystal density greater than 1,8 g/ cm ³ and having a detonation velocity greater than 8 000 m/ s.

I.1A.051	1C240	Nickel powder and porous nickel metal, other than those specified in I.0A.013, as follows:
		a. Nickel powder having both of
		the following
		characteristics: 1. A nickel
		purity
		content of 99,0 % or
		greater by weight;
		and
		2. A mean
		particle
		size
		of less than 10
		micrometre
		measured
		by
		American
		Society
		for Testing and
		Materials
		(ASTM)
		B330
		standard;
		b. Porous nickel metal produced from
		materials specified in I.1A.051.a.
		Note: I.1A.051 does not
		prohibit the following:
		a. Filamentary nickel powders;
		b. Single porous nickel sheets with an area
		of 1 000 cm ² per
		<i>sheet or less.</i> Technical Notes:
		<i>I.1A.051.b. refers to porous</i>
		metal formed by compacting
		and sintering the materials in
		I.1A.051.a. to form a metal
		material with fine pores interconnected throughout
		the structure.

I.1B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.1B.001	ex 1D001	'Software' specially designed or modified for the 'development', 'production' or 'use' of equipment specified in I.1A.006.
I.1B.002	1D101	'Software' specially designed or modified for the 'use' of goods specified in I.1A.007 to I.1A.009, or I.1A.011 to I.1A.013.
I.1B.003	1D103	'Software' specially designed for analysis of reduced observables such as radar reflectivity, ultraviolet/ infrared signatures and acoustic signatures.
I.1B.004	1D201	'Software' specially designed for the 'use' of goods specified in I.1A.014.
I.1B.005	1E001	'Technology' according to the General Technology Note for the 'development' or 'production' of equipment or materials specified in I.1A.006 to I.1A.051.
I.1B.006	1E101	'Technology' according to the General Technology Note for the 'use' of goods specified in I.1A.001, I.1A.006 to I.1A.013, I.1A.026, I.1A.028, I.1A.029 to I.1A.032, I.1B.002 or I.1B.003.
I.1B.007	<i>ex</i> 1E102	'Technology' according to the General Technology Note for the 'development' of 'software' specified in I.1B.001 to I.1B.003.
I.1B.008	1E103	'Technology' for the regulation of temperature, pressure or atmosphere in autoclaves or hydroclaves,

<i>Status:</i> Point in time view as at 17/12/2009.
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Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		when used for the 'production' of 'composites' or partially processed 'composites'.
I.1B.009	1E104	'Technology' relating to the 'production' of pyrolytically derived materials formed on a mould, mandrel or other substrate from precursor gases which decompose in the 1 573 K (1 300 °C) to 3 173 K (2 900 °C) temperature range at pressures of 130 Pa to 20 kPa. Note: I.1B.009 includes 'technology' for the composition of precursor gases, flow-rates and process control schedules and parameters.
I.1B.010	<i>ex</i> 1E201	'Technology' according to the General Technology Note for the 'use' of goods specified in I.1A.002 to I.1A.005, I.1A.014 to I.1A.023, I.1A.024.b., I.1A.033 to I.1A.051, or I.1B.004.
I.1B.011	1E202	'Technology' according to the General Technology Note for the 'development' or 'production' of goods specified in I.1A.002 to I.1A.005.
I.1B.012	1E203	'Technology' according to the General Technology Note for the 'development' of 'software' specified in I.1B.004.

I.2 MATERIALS PROCESSING

I.2A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description	
I.2A.001	ex 2A001*	Anti-friction bearings and bearing systems, as follows, and components therefor: <i>Note: I.2A.001 does not</i> <i>prohibit balls with tolerances</i> <i>specified by the manufacturer</i> <i>in accordance with ISO 3290</i> <i>as grade 5 or worse.</i> Radial ball bearings having all tolerances specified by the manufacturer in accordance with ISO 492 Tolerance Class 2 (or ANSI/ABMA Std 20 Tolerance Class ABEC-9 or RBEC-9, or other national equivalents), or better and having all of the following characteristics: a. An inner ring bore diameter between 12 and 50 mm; b. An outer ring outside diameter between 25 and 100 mm; and c. A width between 10 and 20 mm.	
I.2A.002 a Manufacturers calculat	2A225	Crucibles made of materials resistant to liquid actinide metals, as follows: a. Crucibles having both of the following characteristics: 1. A volume of between 150 cm ³ and 8 000 cm ³ ; and 2. Made of or coated	

	with any		
	of the		
	following		
	materials, having a purity of 98 % or		
	greater by		
	weight:	Calcium	
	a.	fluoride	
	1.	$(CaF_2);$	
	b.	Calcium	
		zirconate	
		(metazirconate)	
		(CaZrO ₃);	
	c.	Cerium	
		sulphide	
		$(Ce_2S_3);$	
	d.	Erbium	
		oxide	
		(erbia)	
		$(Er_2O_3);$	
	e.	Hafnium	
		oxide	
		(hafnia)	
		$(HfO_2);$	
	f.	Magnesium	
		oxide	
		(MgO);	
	g.	Nitrided	
		niobium-	
		titanium-	
		tungsten	
		alloy	
		(approximately	
		50	
		%	
		Nb,	
		30	
		⁰∕₀ ;	
		Ti,	
		20	
		%	
	1	W);	
	h.	Yttrium	
		oxide	
		(yttria)	
		$(Y_2O_3);$	
		or	
n accordance with ISO 230/2 (1997) should consult the c established.	ompetent		

Manufacturers calculating positioning accuracy in accordance authorities of the Member State in which they are established.

a

i. Zirconium oxide (zirconia) (ZrO ₂); b. Crucibles having both of the following characteristics: 1. A volume of between 50 cm ³ and 2 000 cm ³ ; and 2. Made of or lined with tantalum, having a purity of 99,9 % or greater by weight; c. Crucibles having all of the following characteristics: 1. A volume of between 50 cm ³ and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any ere in accordence with ISO 2302 (1997) should consult for competent					
 b. Crucibles having both of the following characteristics: 1. A volume of between 50 cm³ and 2 000 cm³; and 2. Made of or lined with tantalum, having a purity of 99,9 % or greater by weight; c. Crucibles having all of the following characteristics: 1. A volume of between 50 cm³ and 2 000 cm³; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any 				i.	oxide (zirconia)
of between 50 cm ³ and 2 000 cm ³ ; and 2. Made of or lined with tantalum, having a purity of 99,9 % or greater by weight; c. Crucibles having all of the following characteristics: 1. A volume of between 50 cm ³ and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any		b.	having be the follow character	oth of wing ristics:	
 2. Made of or lined with tantalum, having a purity of 99,9 % or greater by weight; c. Crucibles having all of the following characteristics: A volume of between 50 cm³ and 2 000 cm³; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and Coated with tantalum carbide, nitride, boride, or any 			1.	of between 50 cm ³ and 2 000	0
having a purity of 99,9 % or greater by weight; c. Crucibles having all of the following characteristics: 1. A volume of between 50 cm ³ and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any			2.	Made of or lined wit	h
c. Crucibles having all of the following characteristics: 1. A volume of between 50 cm ³ and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any				having a purity of 99,9 % o greater b	r
of between 50 cm ³ and 2 000 cm ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any		c.	all of the character	s having following istics:	-
2. m ³ ; 2. Made of or lined with tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any			1.	of between 50 cm ³	
tantalum, having a purity of 98 % or greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any			2.	cm ³ ; Made	0
greater by weight; and 3. Coated with tantalum carbide, nitride, boride, or any				tantalum having a purity of	,
with tantalum carbide, nitride, boride, or any			_	greater b weight; and	у
boride, or any			3.	with tantalum carbide,	
NAME AND ADDREE WHILE LAND / MU/ 11997/1800000 CODSIDE THE CONTRACTOR	ney in accordance with ISO 230/2 (1997) should	consult the or	boride, or any	

		combination thereof
I.2A.003	2A226	Valves having all of the following characteristics:a.A 'nominal size' of 5 mm or greater;b.Having a bellows seal; andc.Wholly made
I.2A.004	<i>ex</i> 2B001.a*, 2B001.d	 Machine tools and any combination thereof, for removing (or cutting) metals, ceramics or 'composites', which, according to the manufacturer's technical specification, can be equipped with electronic devices for 'numerical control', and specially designed components as follows: N.B.: See also I.2A.016. Note 1: I.2A.004 does not prohibit special purpose machine tools limited to the manufacture of gears. Note 2: I.2A.004 does not prohibit special purpose machine tools limited to the manufacture of any of the following parts: a. Crankshafts or camshafts; b. Tools or cutters; c. Extruder worms; Note 3: A machine tool

	three turning, milling or	
	grinding capabilities (e.g.,	
	a turning machine with	
	milling capability), must	
	be evaluated against each	
	applicable entry I.2A.004.a	
	and I.2A.016.	
	Machine tools	
	for turning, for	
	machines capable	
	of machining	
	diameters greater	
	than 35 mm, having	
	all of the following	
	characteristics:	
	1. Positioning	
	accuracy	
	with 'all	
	compensations	3
	available'	,
	equal to	
	or less	
	(better)	
	than 6 µm	
	according	
	to ISO	
	230/2	
	(1988) ^a or	
	national	
	equivalents	
	along any	
	linear	
	axis; and	
	2. Two or	
	more axes	
	which	
	can be	
	coordinated	
	simultaneously	7
	for	Y
	'contouring	
	control';	
	Note 1: I.2A.004.a.	
	does not prohibit	
	turning machines	
	specially designed	
	for the production	
	of contact lenses,	
	having all of	
	the following	
	characteristics:	
cordance with ISO 230/2 (

1. Machine controller limited to using ophthalmic based software for part programming data input; and 2. No vacuum chucking. Note 2: I.2A.004.a does not prohibit bar machines (Swissturn), limited to machining only bar feed thru, if maximum bar diameter is equal to or less than 42 mm and there is no capability of mounting chucks. Machines may have drilling and/or milling capabilities for machining parts with diameters less than 42 mm. Electrical discharge machines (EDM) of the non-wire type which have two or more rotary axes which can be coordinated simultaneously for 'contouring control'; ex 2B006.b* Dimensional inspection or measuring systems, equipment and 'electronic assemblies', as follows: Linear and angular displacement measuring

a Manufacturers calculating positioning accuracy in accordance with ISO 230/2 (1997) should consult the competent authorities of the Member State in which they are established.

I.2A.005

	instrume	nts, as	
	follows:		
	10110 (05.	Linear	
		displacen	nent
		measuring	
		instrumer	
			115
		having	_
		any of the	
		following	
		Technical	l
		Notes:	
		For the	
		purpose d	
		I.2A.005.	b.1.
		'linear	
		displacen	nent'
		means the	е
		change of	f
		distance	
		between	
		the	
		measurin	q
		probe	8
		and the	
		measurea	1
		object.	*
			Non-
			contact
			type
			measuring
			systems
			with
			a
			'resolution'
			equal
			to
			or
			less
			(better)
			than
			0,2
			μm
			within
			а
			measuring
			range
			up
			to
			0,2
			mm;
racy in accordance with ISO 230/2 (1	997) should consult the or		

	b.	Linear voltage	2
		differer	
		transfor	
		systems	
		having	
		all	
		of the	
		followi	teristics:
		1.	'Linearity'
		1.	equal
			to
			or
			less
			(better)
			than
			0,1
			%
			within
			a .
			measuring
			range
			up to
			to 5
			mm; and
		2.	and Drift
		∠.	equal
			to
			or
			less
			(better)
			than
			0,1
			%
			per
			day
			at
			a standard
			standard
			ambient test
			room
			temperature
			±
			1
			K;
			or
cy in accordance with ISO 230/2 (1997)	should consult the compete	ent	

Manufacturers calculating positioning accuracy in accordance with authorities of the Member State in which they are established.

a

		c.	Measurin	g
			systems	0
			having	
			all	
			of	
			the	
			following	,. Containina
				Containing
				a 11
				'laser';
				and
				Maintaining,
				for
				at
				least
				12
				hours,
				over
				a
				temperature
				range
				of
				±
				1
				K
				around
				a
				standard
				temperature
				and
				at
				a
				standard
				pressure,
				all
				of
				the
				following:
				a. A
				'res
				ove
				thei
				full
				scal
				of
				0,1
				μm
				or logg
				less
				(ber
1				and
cordance with ISO 230/2 (199	() snould consult the co	mpetent		

> b. А 'me unc equ to or less (be that (0,2 +L/2 000 μm (L is the mea len in mm *Note:* I.2A.005.b.1. does not prohibit measuring interferomete systems, without closed or open loop feedback, containing а laser to measure slide movement errors of machine tools, dimensional inspection machines, or

		similar equipment Angular displacement measuring instruments having an 'angular position deviation' equal to or less (better) than 0,00025 °; Note: I.2A.005.b.2. does not prohibit optical instruments, such as autocollimators, using collimated light (e.g. laser light) to detect angular displacement of a
I.2A.006	2B007.c	mirror'Robots' having the following characteristics and specially designed controllers and 'end-effectors' therefor: N.B.: See also I.2A.019. c.c.Specially designed or rated as radiation-hardened to withstand a total radiation dose greater than $5 \times$ 10^3 Gy (silicon) without operational degradation. Technical Notes: The term Gy(silicon) refersth ISO 230/2 (1997) should consult the competent

Status: Point in time view as at 1 Changes to legislation: There are currently no kno Council Regulation (EC) No 423/2007 (repealed). (So	wn outstanding effects for the
	to the energy in Joules per kilogram absorbed by an unshielded silicon sample when

	sample when exposed to ionising radiation.
2B104	 'Isostatic presses' having all of the following: N.B.: See also I.2A.017. a. Maximum working pressure of 69 MPa or greater; b. Designed to achieve and maintain a controlled thermal environment of 873 K (600 °C) or greater; and c. Possessing a chamber cavity with an inside diameter of 254 mm or greater.
2B105	Chemical vapour deposition (CVD) furnaces designed or modified for the densification of carbon-carbon composites.
2B109	Flow-forming machines and specially designed components as follows: N.B.: See also I.2A.020. a.a.Flow-forming machines having all of the following: 1.1.According to the manufacturer's technical specification, can be equipped with 'numerical control' units or a computer
	2B105

		 when not equipped with such units; and 2. With more that two axes which can be coordina simultant for 'contour control'. b. Specially designed components for flow-forming machines specified in I.2A.009 a. Note: I.2A.009 does not prohibit machines that are not usable in the production of propulsion components and equipment (e.g. motor cases) for 'missiles'. Technical Notes: Machines combining the function of spin-forming and flow-forming are for the purpose of I.2A.009 regarded as flow-forming machines 	l h d n ted eously ing l d
I.2A.010	2B116	Vibration test systems, equipment and components therefor, as follows: a. Vibration test systems employing feedback or closed loop techniques and incorporating a digital controller capable of vibratir a system at an acceleration equal to or greater than 10 g rms between 20 Hz and 2 kHz and imparting forces equal to or greater than 50 kN	g I Ig

		(shaker units), with or without associated amplifiers, capable of imparting a force equal to or greater than 50 kN,
		measured 'bare table', and usable in vibration test systems specified in I.2A.010.a.;
I.2A.011	28117	d. Test piece support structures and electronic units designed to combine multiple shaker units in a system capable of providing an effective combined force equal to or greater than 50 kN, measured 'bare table', and usable in vibration systems specified in I.2A.010.a. Technical Notes: In I.2A.010, 'bare table' means a flat table, or surface, with no fixture or fittings
1.2A.011	2B117	Equipment and process controls, other than those specified in I.2A.007 or

Status: Point in time view as at 17/12/2	009.
Changes to legislation: There are currently no known out	standing effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end	of Document for details)

		I.2A.008, designed or modified for densification and pyrolysis of structural composite rocket nozzles and reentry vehicle nose tips.
I.2A.012	2B119	Balancing machines and related equipment, as follows: N.B.: See also I.2A.021. a. Balancing machines having all the following characteristics: 1. Not capable of balancing rotors/ assemblies having a mass
		greater than 3 kg; 2. Capable of balancing rotors/ assemblies at speeds greater than 12
		3. 500 rpm; 3. Capable of correcting unbalance in two planes or more; and
		4. Capable of balancing to a residual specific unbalance of 0,2 g mm per kg of rotor mass; Note: I.2A.012.a. does not prohibit balancing machines
a Manufacturers calculatin	a positioning accuracy in accordance u	vith ISO 230/2 (1997) should consult the competent

<i>Status:</i> Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		 modified for dental or other medical equipment. b. Indicator heads designed or modified for use with machines specified in I.2A.012.a. Technical Notes: Indicator heads are sometimes known as balancing instrumentation
I.2A.013	2B120	Motion simulators or rate tables having all of the following characteristics:a.Two axes or more;b.Slip rings capable of transmitting electrical power and/or signal information; andc.Having any of the following characteristics:1.For any single axis having all of the following:a.Capable of rates of 400 degrees/sor more, or 30 degrees/
		b. A rate resolution

		A A A A A A A A A A A A A A	es ed for r medica	or ng c
	2B121	Positioning tables (nt
		capable of precise r		
		positioning in any a		
1 1 2 2 2 2		other than those spe		
alculating positionin	g accuracy in accordance with ISO 230/2 (1	(997) should consult the cor	npetent	

a Manufacturers calculating positioning accuracy in accordance with ISO 230/2 (1997) should consult the competent authorities of the Member State in which they are established.

I.2A.014

<i>Status:</i> Point in time view as at 17/12/2009.	
Changes to legislation: There are currently no known outstanding effects for the	
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)	

		 in I.2A.013, having all the following characteristics: a. Two axes or more; and b. A positioning accuracy equal to or better than 5 arc second. Note: I.2A.014 does not prohibit rotary tables designed or modified for machine tools or for medical equipment.
I.2A.015	2B122	Centrifuges capable of imparting accelerations above 100 g and having slip rings capable of transmitting electrical power and signal information.
1.2A.016	2B201, 2B001.b.2 and 2B001.c.2	 Machine tools and any combination thereof, as follows, for removing or cutting metals, ceramics or 'composites', which, according to the manufacturer's technical specification, can be equipped with electronic devices for simultaneous 'contouring control' in two or more axes: Note: For 'numerical control' units prohibited because of their associated 'software' see I.2B.002. a. Machine tools for milling, having any of the following characteristics: Positioning accuracies with 'all compensations available' equal to or less (better) than 6 µm according to ISO

	I		220/2
			230/2
			(1988) ^a or
			national
			equivalents
			along any
			linear
			axis;
		2.	Two or
			more
			contouring
			rotary
			•
		2	axes; or
		3.	Five or
			more axes
			which
			can be
			coordinated
			simultaneously
			for
			'contouring
			control'.
		Note: I.2	A.016.a.
		does not	nrohihit
		milling n	
		-	
		having th	
		following	
		characte	ristics:
		a.	X-axis
			travel
			greater
			than 2 m;
			and
		b.	Overall
			positioning
			accuracy
			on the x-
			axis more
			(worse)
			· · ·
			than 30
			μт.
	b.	Machine	tools for
		grinding,	having
			e following
		character	
		1.	Positioning
		1.	
			accuracies
			with 'all
			compensations
			available'
			equal to
			or less
dance with ISO 230/2 (1997) should	consult the or	

 (better) than 4 μm according to ISO 230/2 (1988)^a or national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm outside 		
than 4 µm according to ISO 230/2 (1988) ^a or national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2.4.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		(better)
according to ISO 230/2 (1988) ^a or national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
to ISO 230/2 (1988) ^a or national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
(1988) ^a or national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		230/2
national equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		(1988) ^a or
equivalents along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
along any linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
linear axis; 2. Two or more contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
 Two or more contouring rotary axes; or Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: Cylindrical external, internal, and external, internal grinding machines having all of the following characteristics:		
 Two or more contouring rotary axes; or Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: Cylindrical external, internal, and external, internal grinding machines having all of the following characteristics:		axis;
contouring rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm	2.	,
rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		more
rotary axes; or 3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		contouring
3. Five or more axes which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
more axes which can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		axes; or
which can be coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm	3.	Five or
can be coordinated simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		more axes
coordinated simultaneously for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		which
simultaneously for 'contouring control'. Note: 1.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
for 'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		coordinated
'contouring control'. Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
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Note: I.2A.016.b. does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		'contouring
does not prohibit the following grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
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grinding machines: a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
a. Cylindrical external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
external, internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		g machines:
internal, and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm	ä.	Cylinarical
and external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
external- internal grinding machines having all of the following characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
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characteristics: 1. Limited to a maximum workpiece capacity of 150 mm		
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a maximum workpiece capacity of 150 mm		1. Limited
maximum workpiece capacity of 150 mm		to
workpiece capacity of 150 mm		а
capacity of 150 mm		
of 150 mm		<u> </u>
150 mm		
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		diameter
		or
		length;
		and
	2.	Axes
	2.	limited
		to
		<i>X</i> ,
		z and
b.	lia	С;
0.	Jig	
	grinders	
	that do	
	not have	
	a z-axis	
	or a w-	
	axis with	
	an overa	
	positioni	ng
	accuracy	,
	less	
	(better)	
	than 4 µr	п
	accordin	g
	to ISO	
	230/2	
	$(1988)^{a} c$	or
	national	
	equivale	nts.
Note 1: I.2A.016 d	loes not	
prohibit special pu	irpose	
machine tools limi	ted to the	
manufacture of an	y of the	
following parts:		
a. <i>Gears;</i>		
b. Cranksho	afts or	
camshafi	s;	
c. Tools or	cutters;	
d. Extruder	worms.	
Note 2: A machine	e tool	
having at least two	o of the	
three turning, mill	0	
grinding capabilit	0	
a turning machine		
milling capability)		
be evaluated agair		
applicable entry I.		
or I.2A.016.a. or b		

I.2A.017	2B204	'Isostatic presses', other than those specified in I.2A.007, and related equipment, as follows:
		follows: a. 'Isostatic presses' having both of the following characteristics: 1. Capable of achieving a maximum working pressure of 69 MPa or greater; and 2. A chamber cavity with an inside diameter in excess of 152
		mm; b. Dies, moulds and controls, specially designed for 'isostatic presses' specified in I.2A.017.a. Technical Notes: In I.2A.017 the inside chamber dimension is that of the chamber in which both the working temperature
		and the working temperature and the working pressure are achieved and does not include fixtures. That dimension will be the smaller of either the inside diameter of the pressure chamber or the inside diameter of the insulated furnace chamber, depending on which of the two chambers is located inside the other.
I.2A.018	2B206	Dimensional inspection machines, instruments or

	systems.	other than	1 those
		in I.2A.0	
	follows:		,
	a.	Compute	r
	u.	controlle	
		numerica	
		controlle	
		dimensio	
			n machines
		having b	
		the follow	
		character	
		1.	Two or
		1.	
			more axes; and
		2.	A one-
		∠.	dimensional
			length 'measurement
			uncertainty'
			equal to or less
			(better)
			than $(1,25)$
			+ L/1
			000) μm
			tested with
			a probe
			of an
			'accuracy'
			of less
			(better)
			than 0,2
			μm (L
			is the
			measured
			length in
			millimetres)
			(Ref.:
			VDI/VDE
			2617 Parts
			1 and 2);
	b.	Systems	for
		-	eous linear-
		angular i	nspection
		of hemis	
		having b	
		the follow	
		character	
		1.	'Measurement
			uncertainty'
cordance with ISO 230/2 (1007) should	consult the co	

		along any linear axis equal to or less (better) than 3,5 µm per 5 mm; and 2. 'Angular position deviation' equal to or less than 0,02 °. Note 1: Machine tools that can be used as measuring machines are prohibited if they meet or exceed the criteria specified for the machine tool function or the measuring machine function. Note 2: A machine specified in 1.2A.018 is prohibited if it exceeds the prohibition threshold anywhere within its operating range. Technical Notes: 1. The probe used in determining the measurement uncertainty of a dimensional inspection system
		shall be described in VDI/VDE 2617 parts 2, 3 and 4.
		2. All parameters of measurement values in 1.2A.018 represent plus/ minus i.e., not total band.
I.2A.019 a Manufacturers calculating position	2B207 ing accuracy in accordance with ISO 230/2	'Robots', 'end-effectors' and control units, other than those specified in I.2A.006, as follows: a. 'Robots' or 'end- effectors' specially designed to comply

		b.	standard to handl explosiv example electrica ratings f explosiv Control specially for any o 'robots'	e, meeting al code for high- ves); units y designed of the or 'end- s' specified
I.2A.020	2B209	forming of flow f other tha	machines orming f in those s	unctions, pecified in ndrels, as es poth of owing
		b.	to form rotors of	orming s designed cylindrical
a Manufacturers calculating position	ing accuracy in accordance with ISO 230/2 ((1997) should	consult the	competent

	Status: Point in time view of es to legislation: There are currently n Regulation (EC) No 423/2007 (repeale	o known outstanding effects for the
		75 mm and 400 mm. Note: I.2A.020.a. includes machines which have only a single roller designed to deform metal plus two auxiliary rollers which support the mandrel, but do not participate directly in the deformation process.
I.2A.021	2B219	Centrifugal multiplane balancing machines, fixed or portable, horizontal or vertical, as follows: a. Centrifugal balancing machines designed for balancing flexible rotors having a length of 600 mm or more and having all of the following characteristics: 1. Swing or journal diameter greater than 75 mm; 2. Mass capability of from 0,9 to 23 kg; and 3. Capable of balancing speed of revolutior greater than 5 000 r.p.m.; b. Centrifugal balancing machines designed for
	g positioning accuracy in accordance v r State in which they are established.	balancing hollow cylindrical rotor components and having all of the following characteristics: vith ISO 230/2 (1997) should consult the competent

		1.	Journal diameter greater than 75
		2.	mm; Mass capability of from 0,9 to 23
		3.	kg; Capable of balancing to a residual imbalance equal to or less than 0,01 kg ×
		4.	mm/kg per plane; and Belt drive type.
I.2A.022	2B225	b. A capab bridging the top of cell wal	tors that can e remote emical ions or hot er of the eristics: iility of ing 0,6 m of hot cell rough-the- eration); or iility of g over of a hot l with a ss of 0,6 m (over-the- eration). tors on of actions to reg arm and Chey may re' type

I.2A.023	2B226	Controlled atmosphere (vacuum or inert gas) induction furnaces, and power supplies therefor, as follows:
		a. Furnaces having all of the following characteristics: 1. Capable of operation above 1 123 K (850 °C);
		2. Induction coils 600 mm or less in diameter; and
		3. Designed for power inputs of 5 kW or more;
		b. Power supplies, with a specified power output of 5 kW or more, specially designed for furnaces specified in 1.2A.023.a. Note: I.2A.023.a. does not prohibit furnaces designed for the processing of semiconductor wafers.
I.2A.024	2B227	Vacuum or other controlled atmosphere metallurgical melting and casting furnaces and related equipment as follows: a. Arc remelt and casting furnaces having both of the following characteristics:
a Manufacturers calculating po	g positioning accuracy in accordance w	1. Consumable electrode capacities between ith ISO 230/2 (1997) should consult the competent

		 1 000 cm³ and 20 000 cm³, and Capable of operating with melting temperatures above 1 973 K (1 700 °C); Electron beam melting furnaces and plasma atomization and melting furnaces, having both of the following characteristics: A power of 50 kW or greater; and Capable of operating with melting temperatures above 1 473 K (1 200 °C); Computer control and monitoring systems specially configured for any of the furnaces specified in
I.2A.025	2B228	I.2A.024.a. or b. Rotor fabrication or
	positioning accuracy in accordance w	assembly equipment, rotor straightening equipment, bellows-forming mandrels and dies, as follows: a. Rotor assembly equipment for assembly of gas centrifuge rotor tube sections,

b.	mandrels and shrin machine.	A.025.a. precision s, clamps, nk fit
	equipme alignmer centrifug tube sect common Technica <i>In I.2A.0</i> <i>such equ</i>	nt for t of gas ge rotor ions to a axis; ll Notes: 25.b.
	precision probes li to a com that subs	n measuring nked puter requently the action cample, ic rams
c.	the rotor sections. Bellows- mandrels for produ- single-cc bellows. Technica In I.2A.0 bellows in of the for	tube forming s and dies acing onvolution al Notes: 25.c. the have all lowing
	characte 1.	Inside diameter between 75 mm and 400
	2.	mm; Length equal to or greater than 12,7 mm;
	3.	Single convolution depth

		greater than 2 mm; and 4. Made of high- strength aluminium alloys, maraging steel or high strength 'fibrous or filamentary materials'.
I.2A.026	2B230	 'Pressure transducers' capable of measuring absolute pressures at any point in the range 0 to 13 kPa and having both of the following characteristics: a. Pressure sensing elements made of or protected by aluminium, aluminium alloy, nickel or nickel alloy with more than 60 % nickel by weight; and b. Having either of the following characteristics: 1. A full scale of less than 13 kPa and an 'accuracy' of better than + 1 % of full
		2. A full scale; or 2. A full scale of 13 kPa or greater and an 'accuracy' of better

authorities of the Member State in which they are established.

	Status: Point in time view a anges to legislation: There are currently no cil Regulation (EC) No 423/2007 (repealed	o known outstanding effects for the
		than + 130 Pa. Technical Notes: For the purposes of 1.2A.026, 'accuracy' includes non- linearity, hysteresis and repeatability at ambient temperature.
I.2A.027	2B231	 Vacuum pumps having all of the following characteristics: a. Input throat size equal to or greater than 380 mm; b. Pumping speed equal to or greater than 15 m³/s; and c. Capable of producing an ultimate vacuum better than 13 mPa. Technical Notes: 1. The pumping speed is determined at the measurement point with nitrogen gas or air. 2. The ultimate vacuum is determined at the input of the pump with the input of the pump with the input of the pump blocked off
I.2A.028	2B232	Multistage light gas guns or other high- velocity gun systems (coil, electromagnetic, and electrothermal types, and other advanced systems) capable of accelerating projectiles to 2 km/s or greater

I.2B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.2B.001	ex 2D001	'Software', other than that specified in I.2B.002, specially designed or modified for the 'development', 'production' or 'use' of equipment specified in I.2A.004 to I.2A.006.
I.2B.002	2D002	'Software' for electronic devices, even when residing in an electronic device or system, enabling such devices or systems to function as a 'numerical control' unit, capable of co- ordinating simultaneously more than four axes for 'contouring control'. Note 1: I.2B.002 does not prohibit 'software' specially designed or modified for the operation of machine tools not specified in Category I.2.
I.2B.003	2D101	'Software' specially designed or modified for the 'use' of equipment specified in I.2A.007 to I.2A.015.
I.2B.004	2D201	'Software' specially designed for the 'use' of equipment specified in I.2A.017 to I.2A.024. Note: 'Software' specially designed for equipment specified in I.2A.018 includes 'software' for simultaneous measurements of wall thickness and contour
I.2B.005	2D202	'Software' specially designed or modified for the 'development', 'production' or 'use' of equipment specified in I.2A.016.

I.2B.006	<i>ex</i> 2E001	'Technology' according to the General Technology Note for the 'development' of equipment or 'software' specified in I.2A.002 to I.2A.004, I.2A.006.b., I.2A.006.c, I.2A.007 to I.2A.028, I.2B.001, I.2B.003 or I.2B.004.
I.2B.007	<i>ex</i> 2E002	'Technology' according to the General Technology Note for the 'production' of equipment specified in I.2A.002 to I.2A.004, I.2A.006.b., I.2A.006.c, I.2A.007 to I.2A.028.
I.2B.008	2E101	'Technology' according to the General Technology Note for the 'use' of equipment or 'software' specified in I.2A.007, I.2A.009, I.2A.010, I.2A.012 to I.2A.015 or I.2B.003.
I.2B.009	<i>ex</i> 2E201	'Technology' according to the General Technology Note for the 'use' of equipment or 'software' specified in I.2A.002 to I.2A.005, I.2A.006.b., I.2A.006.c., I.2A.016 to I.2A.020, I.2A.022 to I.2A.028, I.2B.004 or I.2B.005.

I.3 ELECTRONICS

I.3A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.3A.001	<i>ex</i> 3A001.a*	Electronic components, as follows: a. General purpose integrated circuits, as follows: <i>Note 1: The</i> <i>prohibition status</i> <i>of wafers (finished</i>

> or unfinished), in which the function has been determined, is to be evaluated against the parameters of *I.3A*.001.a. *Note 2: Integrated* circuits include the following types: 'Monolithic integrated circuits'; 'Hybrid integrated circuits'; 'Multichip integrated circuits'; 'Film type integrated circuits', including silicon-onsapphire integrated circuits; 'Optical integrated circuits'. Integrated circuits having all of the following characteristics: Designed a. or rated as radiation hardened to withstand а total irradiation dose of 5 Х 10^{3} Gy

		b.	(silicon) or higher; and Usable in protecting rocket systems and 'unmanned aerial vehicles' against nuclear effects (e.g., Electromagnetic Pulse (EMP), X- rays, combined blast and thermal effects), and usable for 'missiles'.
I.3A.002	3A101	Electronic equipment, devices and components, as follows: a. Analogue-to- digital converters, usable in 'missiles designed to meet military specifications for ruggedized equipment; b. Accelerators capable of delivering electromagnetic radiation produced by bremsstrahlung from accelerated electrons of 2 MeV or greater, and	l

			systems c those acco Note: I.3.2 above doe specify eq specially for medic purposes.	elerators. 4.002.b. es not uipment designed al	
I.3A.003	3A201	Electroni follows; a.	c compon- Capacitor either of t following characteri 1.	s having he sets of stics: a.	Voltage rating greater than 1,4
					kV; Energy storage greater than 10 J;
				с.	Capacitance greater than $0,5 \ \mu F;$ and
					Series inductance less than 50 nH; or
			2.	a.	Voltage rating greater than 750 V;
				b.	Capacitance greater than 0,25 μF; and

I		0	Series
		c.	inductance
			less
			than
			10
			nH;
b.	Superc	conducting	,
	soleno		
	electro	magnets	
	having		
		lowing	
		teristics:	
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с.	allowed, the relate document specify the shipment dispatche of' the int systems. Flash X generator pulsed el	ts clearly hat the ss are ed 'as par haging ray rs or ectron ors having the g sets of	ť
	1.	a.	An accelerator peak electron energy of 500 keV or greater but less than 25 MeV;
		b.	and With a 'figure of merit' (K) of 0,25 or greater; or
	2.	a.	An accelerator peak electron energy of 25 MeV or

greater; and b. А 'peak power' greater than 50 MW. *Note:* I.3A.003.c. does not prohibit accelerators that are component parts of devices designed for purposes other than electron beam or X-ray radiation (electron microscopy, for example) nor those designed for medical purposes: Technical Notes: 1. The 'figure of merit' K is defined as: $K = 1,7 \times$ $10^{3}V^{2,.65}O$ V is the peak electron energy in million electron volts. *If the accelerator* beam pulse duration is less than or equal to $1 \mu s$, then *Q* is the total accelerated charge in Coulombs. If the accelerator beam pulse duration is greater than $1 \mu s$, then Q is the maximum accelerated charge in $1 \mu s$. *Q* equals the integral of i with respect to t, over

the time of the be $(Q = \int id)$ i is beam	am pulse t), where current res and t is
2.	'Peak power' = (peak potential in volts) × (peak beam current in amperes).
3.	In machines based on microwave accelerating cavities, the time duration of the beam pulse is the lesser of 1 µs or the duration of the bunched beam packet resulting from one microwave modulator pulse.
4.	In machines based on microwave accelerating cavities, the peak beam current is the average

	Status: Point in time view a nges to legislation: There are currently no il Regulation (EC) No 423/2007 (repealed	o known outstanding effects for the
		current in the time duration of a bunched beam packet
I.3A.004 3A225		 Frequency changers or generators, other than those specified in I.0A.002.b.13., having all of the following characteristics: a. Multiphase output capable of providing a power of 40 W or greater; b. Capable of operating in the frequency range between 600 and 2 000 Hz; c. Total harmonic distortion better (less) than 10 %; and d. Frequency control better (less) than 0, %. Technical Notes: Frequency changers in I.3A.004 are also known as converters or inverters.
I.3A.005	3A226	 High-power direct current power supplies, other than those specified in I.0A.002.j.6., having both of the following characteristics: a. Capable of continuously producing, over a time period of 8 hours, 100 V or greater with curren output of 500 A or greater; and b. Current or voltage stability better than 0,1 % over a time period of 8 hours
I.3A.006	3A227	High-voltage direct current power supplies, other

		 than those specified in I.0A.002.j.5., having both of the following characteristics: a. Capable of continuously producing, over a time period of 8 hours, 20 kV or greater with current output of 1 A or greater; and b. Current or voltage stability better than 0,1 % over a time period of 8 hours.
I.3A.007	3A228	Switching devices, as
		follows:
		 a. Cold-cathode tubes, whether gas filled or not, operating similarly to a spark gap, having all of the following characteristics: Containing three or more electrodes; Anode peak voltage rating of 2,5 kV or more; Anode peak current rating of 100 A or
		4. Mode delay time of 10 μs or
		less; Note: I.3A.007 includes gas krytron tubes and vacuum sprytron tubes. b. Triggered spark- gaps having both of the following characteristics:

			1. 2.	An anode delay time of 15 µs or less; and Rated for a peak current of 500 A or
		с.	Modules assembli a fast sw function of the fo characte 1.	more; or es with itching having all llowing
			2.	greater than 2 kV; Anode peak current rating of 500 A or more; and Turn on
			5.	time of 1 µs or less.
I.3A.008	3A229	high-cur as follow	vs: e also Mi ontrols. Explosiv firing se to drive controlled detonato in I.3A.(Modular pulse ge (pulsers)	e generators litary re detonator ts designed multiple ed rs specified 011; electrical nerators b having e following

2.	Enclosed
۷.	in a dust-
	tight
3.	enclosure;
э.	Capable of
	delivering
	their
	energy in less than
Λ	15 μs; Howing
4.	Having
	an output
	greater
	than 100
5	A; Having
5.	Having
	a 'rise
	time' of
	less than
	10 μs into loads of
	less than
6.	40 ohms; No
0.	dimension
	greater
	than 254
	mm;
7.	Weight
	less than
	25 kg; and
8.	Specified
0.	for use
	over an
	extended
	temperature
	range 223
	K (– 50
	°C) to 373
	K (100
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In I.3A.0	
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		interval from 10 % to 90 % current amplitude when driving a resistive load
I.3A.009	3A230	 High-speed pulse generators having both of the following characteristics: a. Output voltage greater than 6 V into a resistive load of less than 55 ohms, and b. 'Pulse transition time' less than 500 ps. Technical Note: In I.3A.009, 'pulse transition time' is defined as the time interval between 10 % and 90 % voltage amplitude
I.3A.010	3A231	Neutron generator systems, including tubes, having both of the following characteristics: a.Designed for operation without an external vacuum system; and b.Utilizing electrostatic acceleration to induce a tritium- deuterium nuclear reaction
I.3A.011	3A232	Detonators and multipoint initiation systems, as follows: N.B.: See also Military Goods Controls. a. Electrically driven explosive detonators, as follows: 1. Exploding bridge (EB); 2. Exploding bridge wire (EBW); 3. Slapper;

foil initiators (EFI); b. Arrangements using single or multiple detonators designed to nearly simultaneously initiate an explosive surface over greater than 5 000 mm ² from a single firing signal with an initiation timing spread over the surface of less than 2,5 μs. Note: 1.3A.011 does not prohibit detonators using only primary explosives, such as lead azide. Technical Note: In 1.3A.011 the detonators of concern all utilise a small electrical conductor (bridge, bridge wire or foil) that explosively vapourises when a fast, high-current electrical pulse is passed through it. In nonslapper-types, the exploding conductor starts a chemical detonation in a contacting high-explosive material such as PETN (Pentaerythritoltetranitrate). In slapper detonators, the explosive vapourisation of the electrical conductor drives a flyer or slapper across a gap and the impact of the slapper in some designs is driven by a magnetic force. The term exploding foil detonator Also, the word initiator is sometimes used in place of the word detonator		4.	Exploding
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I.3A.012	3A233		ectrometer se specifie	
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				steel or
				molybdenum and
				equipped
				with a
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				capable of
				cooling to
				193 K (–
				80 °C) or
				less; or

		f.	equipped microflu	orination be designed ides or
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I.3B

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.3B.001	3D101	'Software' specially designed or modified for the 'use' of equipment specified in I.3A.002.b
I.3B.002	<i>ex</i> 3E001	'Technology' according to the General Technology Note for the 'development' or 'production' of equipment or materials specified in I.3A.001 to I.3A.003, or in I.3A.007 to I.3A.012.
I.3B.003	<i>ex</i> 3E101	'Technology' according to the General Technology Note for the 'use' of equipment or 'software' specified in I.3A.001, I.3A.002 or I.3B.001.
I.3B.004	3E102	'Technology' according to the General Technology Note for the 'development' of 'software' specified in I.3B.001.
I.3B.005	<i>ex</i> 3E201	'Technology' according to the General Technology Note for the 'use' of equipment

TECHNOLOGY, INCLUDING SOFTWARE

specified in I.3A.003 to I.3A.012.	

I.4 COMPUTERS

I.4A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.4A.001	4A001.a.1 *	Electronic computers and related equipment, as follows: N.B.: See also I.4A.002. a. Specially designed to have the following characteristics: Rated for continuous operation at temperatures below 228 K (- 45 °C) or above 328 K (55 °C); Note: I.4A.001 does not apply to computers specially designed for civil automobile or railway train applications.
I.4A.002	4A101*	Analogue computers, 'digital computers' or digital differential analysers having all of the following characteristics: N.B.: See also Military Goods Controls for computers for use in rockets or missiles.

		a. b.	Designed or modified for use in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005; and Designed as ruggedised or radiation hardened to withstand radiation levels of 5 \times 10 ³ Gy (silicon) or higher.
I.4A.003	4A102	designed simulation integrative vehicles or sound in I.9A.0 N.B.: See Goods C missiles <i>Note: Thapplies vis supplies</i>	the also Military Controls for rockets or related computers. <i>his prohibition only</i> <i>when the equipment</i> <i>fed with 'software'</i> <i>d in I.7B.003 or</i>

I.4B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.4B.001	<i>ex</i> 4E001.a	'Technology' according to the General Technology Note, for the 'development', 'production' or 'use' of equipment or 'software' specified in I.4A.001, I.4A.002 or I.4A.003.

I.5 TELECOMMUNICATIONS AND 'INFORMATION SECURITY'

I.5A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.5A.001	5A101	Telemetering and telecontrol equipment, including ground equipment, designed or modified for 'missiles'.Technical Notes:In I.5A.001 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range
		c. Equipment designed for commercial, civil or 'Safety of Life' (e.g. data integrity, flight safety) GNSS services;

I.5B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.5B.001	5D101	'Software' specially designed or modified for the 'use' of equipment specified in I.5A.001.
I.5B.002	5E101	'Technology' according to the General Technology Note for the 'development',

i	'production' or 'use' of equipment specified in I.5A.001 or software specified in I.5B.001.
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I.6 SENSORS AND LASERS

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.6A.001	ex 6A005.b*, ex 6A005.c* and ex 6A005.d* a.: ex 6A005.d.4 b.: ex 6A005.b.2-4 c.: ex 6A005.c.2	 'Lasers', other than those specified in I.0A.002.g.5. or I.0A.002.h.6., components and optical equipment, as follows:^a a. Pulsed excimer (XeF, XeCl, KrF) 'lasers' having all of the following characteristics: 1. Operating at wavelengths between 240 nm and 360 nm; 2. A repetition rate greater than 250 Hz; and 3. An average output power exceeding 500 W.
		b. Copper (Cu) vapour 'lasers' having both of the following characteristics: 1. Operating at
		wavelengths

		levels which meet or exceed a total irradiation dose of 5×10^5 rads (silicon). Technical Notes: In I.6A.003, a 'detector' is defined as a mechanical, electrical, optical or chemical device that automatically identifies and records, or registers a stimulus such as an environmental change in pressure or temperature, an electrical or electromagnetic signal or radiation from a radioactive material. This includes devices that sense by one time operation or failure.
I.6A.004	6A107	Gravity meters (gravimeters) and components for gravity meters and gravity gradiometers, as follows: a.a.Gravity meters and gravity gradiometers, as follows: a.a.Gravity meters, designed or modified for airborne or marine use, and having a static or operational accuracy of 7×10^{-6} m/s ² (0,7 milligal) or less (better), and having a time- to-steady-state registration of two minutes or less; b.b.Specially designed components for gravity meters specified in I.6A.004.a. and gravity gradiometers specified in I.6A.002.
I.6A.005	6A108 s entry do not correspond with those of po	Radar systems and tracking systems as follows: a. Radar and laser radar systems designed or modified for use

		in space l vehicles in I.9A.0 sounding specified I.9A.005 N.B.: See Military Controls and laser for rocke missiles. <i>Note: I.6.</i> <i>includes</i>	specified 01 or 5 rockets in 5 e also Goods for radar systems ts or <i>A.005.a.</i>
		following	
		a. b.	, Terrain contour mapping equipment; Imaging sensor
		C.	equipment; Scene mapping and
		d.	correlation (both digital and analogue) equipment; Doppler navigation radar
			equipment.
	b.	Precision systems, for 'miss follows:	tracking usable
		1.	Tracking systems which use a code translator in conjunction
			with either surface or airborne references or navigation
d with those of points	s a, b and c of	6A005.	

			satellite	
			systems	
			to provi	de
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			with all	
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			followin	g
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		Technica		
		In I.6A.0		
		<i>'missile</i> '	' means	
The texts of points a, b and c in this	entry do not correspond with those of points	a, b and c of 6A005.		

a

Cha Coun	Status: Point in time view a inges to legislation: There are currently no cil Regulation (EC) No 423/2007 (repealed	o known outstanding effects for the
		complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.6A.006	6A202	 Photomultiplier tubes having both of the following characteristics: a. Photocathode area of greater than 20 cm²; and b. Anode pulse rise time of less than 1 ns.
I.6A.007	6A203	Cameras and components, as follows: a. Mechanical rotating mirror cameras, as follows, and specially designed components therefor: 1. Framing cameras with recording rates greater than 225 000 frames per second;
		2. Streak cameras with writing speeds greater than 0,5 mm per microsecon Note: In I.6A.007.a. components of such cameras include their synchronizing electronics units and rotor assemblies consisting of

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	and bear	ings.	
b.	Electronic streak		
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		d.	Other
			framing
			tubes
			and
			solid-
			state
			imaging
			devices
			having
			<u>a</u>
The texts of points a, b and c in this en	ntry do not correspond with those of points a, b and c of 6A005.		

I.6A.008	6A205	'Lasers', 'laser' amplifiers and oscillators, other than those specified in I.0A.002.g.5., I.0A.002.h.6. and I.6A.001; as follows: a. Argon ion 'lasers' having both of the following characteristics: 1. Operating at wavelengths
		fast- image gating time of less than 50 ns specially designed for cameras specified in I.6A.007.b.3.; c. Radiation-hardened TV cameras, or lenses therefor, specially designed or rated as radiation hardened to withstand a total radiation dose greater than 50 × 10^3 Gy(silicon) (5 × 10^6 rad (silicon)) without operational degradation. Technical Notes: <i>The term</i> <i>Gy(silicon) refers</i> <i>to the energy in</i> <i>Joules per kilogram</i> <i>absorbed by an</i> <i>unshielded silicon</i> <i>sample when</i> <i>exposed to ionising</i> <i>radiation</i>

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		1.	Pulse-	
			excited,	
			'Q- switched	
			lasers'	
			having	
			a 'pulse	
			duration'	
			equal to one that	
			1 ns, and	
			having	
			either	
			of the following	т .
			a.	A
				single-
				transverse
				mode
				output having
				an
				average
				output
				power exceeding
				40
				W;
				or
			b.	A
				multiple- transverse
				mode
				output
				having
				an average
				average power
				exceeding
hose of points	a hand c of	F64005		

		50 W; or2.Incorporating frequency doubling to give an output wavelength of 500 nm or more but not exceeding 550 nm and having an average output power exceeding 40 W.
I.6A.009	6A225	Velocity interferometers for measuring velocities exceeding 1 km/s during time intervals of less than 10 microseconds. Note: I.6A.009 includes velocity interferometers such as VISARs (Velocity interferometer systems for any reflector) and DLIs (Doppler laser interferometers).
I.6A.010	6A226	 Pressure sensors, as follows: a. Manganin gauges for pressures greater than 10 GPa; b. Quartz pressure transducers for pressures greater than 10 GPa
I.6A.011 a The texts of points a, b and c in	ex 6B108*	Systems specially designed for radar cross section measurement usable for 'missiles' and their subsystems.

I.6B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.6B.001	6D102	'Software' specially designed or modified for the 'use' of goods specified in I.6A.005.
I.6B.002	6D103	'Software' which processes post-flight, recorded data, enabling determination of vehicle position throughout its flight path, specially designed or modified for 'missiles'. Technical Notes: In I.6B.002 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.6B.003	<i>ex</i> 6E001	'Technology' according to the General Technology Note for the 'development' of equipment, materials or 'software' specified in I.6A.001, I.6A.002.c, I.6A.003, I.6A.004 to I.6A.010, I.6B.001 or I.6B.002.
I.6B.004	<i>ex</i> 6E002	'Technology' according to the General Technology Note for the 'production' of equipment or materials specified in I.6A.001, I.6A.002.c or I.6A.003 to I.6A.010.
I.6B.005	<i>ex</i> 6E101	'Technology' according to the General Technology Note for the 'use' of equipment or 'software' specified in I.6A.002 to I.6A.005, I.6A.011, I.6B.001 or I.6B.002.
I.6B.006	<i>ex</i> 6E201	'Technology' according to the General Technology Note for the 'use' of equipment

specified in I.6A.001 or
I.6A.006 to I.6A.010.

I.7 NAVIGATION AND AVIONICS

I.7A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.7A.001	<i>ex</i> 7A002* (<i>ex</i> 7A002.a and <i>ex</i> 7A002.d)	Gyros having any of the following characteristics, and specially designed components therefor: N.B.: See also I.7A.003. a. A 'drift rate''stability', when measured in a 1 g environment over a period of one month and with respect to a fixed calibration value, of less (better) than 0,5 degree per hour when specified to function at linear acceleration levels up to and including 100 g; or b. Specified to function at linear acceleration levels exceeding 100 g.
I.7A.002	7A101, ex 7A001.a.3	Accelerometers as follows, and specially designed components therefor: a. Linear accelerometers, designed for use in inertial navigation systems or in guidance systems of all types, usable in 'missiles', having all the following characteristics, and specially designed

	compone	ents
	therefor;	
	1.	A
		'bias''repeatability'
		of less
		(better)
		than 1 250
		micro g;
		and
	2.	A 'scale
		factor''repeatability
		of less
		(better)
		than 1 250
		ppm;
	Note: I.7	
	does not	specify
	accelero	
		e specially
	designed	
		ed as MWD
	(Measure	
	While Di	
	Sensors j	
	in down	
		perations.
	Technica	
	1	L.
	1.	ln
		I.7A.002.a.
		'missile'
		means
		complete rocket
		systems
		and
		unmanned
		aerial
		vehicle
		systems
		capable
		of a range
		exceeding
		300 km;
	2.	In
		I.7A.002.a.
		the
		measurement
		of 'bias'
		and 'scale
		factor'
		refers to a
I		~

		one sigma standard deviation with respect to a fixed calibration over a period of one year; b. Continuous output accelerometers specified to function at acceleration levels exceeding 100 g.
I.7A.003	7A102*	All types of gyros, other than those specified in I.7A.001, usable in 'missiles', with a rated 'drift rate' 'stability' of less than 0,5° (1 sigma or rms) per hour in a 1 g environment and specially designed components therefor. Technical Note: In I.7A.003 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.7A.004	<i>ex</i> 7A103 (7A103.a, <i>ex</i> 7A103.b and 7A103.c)	Instrumentation, navigation equipment and systems, as follows; and specially designed components therefor: Inertial or other equipment using accelerometers specified in I.7A.002 or gyros specified in I.7A.001 or I.7A.003 and systems incorporating such equipment; Integrated flight instrument systems, which include gyrostabilisers or automatic

modi 'miss 'Integ navig syste or mo for 'r and c of pro a nav accur m Ci Proba or les	s, designed or ified for use in siles'; grated gation ms', designed odified missiles' capable oviding vigational racy of 200 rcle of Equal ability (CEP) ss. nical Notes:
<i>1</i> . a.	An 'integrated navigation system' typically incorporates the following components: An inertial measurement device (e.g., an attitude and heading reference system, inertial reference unit, or inertial navigation system);
b.	One or more external sensors used to update the position and/or velocity, either periodically or

		continuously throughout the flight (e.g., satellite navigation receiver, radar altimeter, and/or Doppler radar); and c. Integration hardware and software;
		2. In I.7A.004.c. 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.7A.005	7A104	Gyro-astro compasses and other devices, which derive position or orientation by means of automatically tracking celestial bodies or satellites and specially designed components therefor.
I.7A.006	7A105	Receiving equipment for Global Navigation Satellite Systems (GNSS; e.g. GPS, GLONASS, or Galileo), having any of the following characteristics, and specially designed components therefor: a. Designed or modified for use in space launch

b.	 vehicles ; in I.9A.0 unmanne vehicles ; in I.9A.0 sounding specified I.9A.005 N.B.: See Military 9 Controls receiving for rocke missiles. Designed or modifi for airbon application having an following 1. 2. 3.	01, d aerial specified 03 or rockets in ; or e also Goods for g equipment ts or d ied me ons and ny of the g: Capable of providing navigation information at speeds in excess of 600 m/ s; Employing decryption, designed or modified for military or governmental services, to gain access to GNSS secured signal/ data; or Being specially designed to employ anti-jam features
		to employ anti-jam

		steerable antenna) to function in an environment of active or passive countermeasures. Note: 1.7A.006.b.2. and I.7A.006.b.3. do not prohibit equipment designed for commercial, civil or 'Safety of Life' (e.g., data integrity, flight safety) GNSS services
I.7A.007	7A106	Altimeters of radar or laser radar type, designed or modified for use in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005. N.B.: See also Military Goods Controls for altimeters for rockets or missiles.
I.7A.008	7A115	Passive sensors for determining bearing to specific electromagnetic source (direction finding equipment) or terrain characteristics, designed or modified for use in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005. N.B.: See also Military Goods Controls for passive sensors for rockets or missiles. Note: I.7A.008 includes sensors for the following equipment: a.a.Terrain contour mapping equipment; b.b.Imaging sensor equipment (both active and passive);

1.7A.009	7A116	 c. Passive interferometer equipment. Flight control systems and servo valves, as follows; designed or modified for use in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005. N.B.: See also Military Goods Controls for flight control systems and servo valves for rockets or missiles. a. Hydraulic, mechanical, electro- optical, or electro- mechanical flight control systems (including fly-by- wire types); b. Attitude control equipment; c. Flight control servo valves designed or modified for the systems specified in I.7A.009.b., and designed or modified to operate in a vibration environment greater than 10 g rms between 20 Hz and 2 kHz.
I.7A.010	7A117	'Guidance sets', usable in 'missiles' capable of achieving system accuracy of 3,33 % or less of the range (e.g., a 'CEP' of 10 km or less at a range of 300 km).
I.7A.011	7B001	Test, calibration or alignment equipment specially designed for equipment specified in I.7A.001 to I.7A.010.
I.7A.012	7B002	Equipment, as follows, specially designed to characterize mirrors for ring 'laser' gyros: N.B.: See also I.7A.014.

<i>Status:</i> Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		a. b.	Scatterometers having a measurement accuracy of 10 ppm or less (better); Profilometers having a measurement accuracy of 0,5 nm (5 angstrom) or less (better).
I.7A.013	7B003*	for the 'p equipme I.7A.001	ent specially designed production' of ant specified in to I.7A.010. 7A.013 includes: Gyro tuning test stations; Gyro dynamic balance stations; Gyro run-in/motor test stations; Gyro evacuation and fill stations; Centrifuge fixtures for gyro bearings; Accelerometer axis align stations; (reserved) Accelerometer test stations; Inertial measurement unit (IMU) module testers; Inertial measurement unit (IMU) platform testers; Inertial measurement unit (IMU) stable element handling fixtures; Inertial measurement unit (IMU) platform
I.7A.014	7B102	designed mirrors,	meters specially I to characterise for 'laser' gyros, measurement

		accuracy of 50 ppm or less (better).
I.7A.015	7B103	 'Production facilities' and 'production equipment' as follows: a. 'Production facilities' specially designed for equipment specified in I.7A.010; b. 'Production equipment', and other test, calibration and alignment equipment, other than that specified in I.7A.011 to I.7A.013, designed or modified to be used with equipment specified in I.7A.001 to I.7A.010.

I.7B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.7B.001	ex 7D101	'Software' specially designed or modified for the 'use' of equipment specified in I.7A.001 to I.7A.008, I.7A.009.a., I.7A.009.b. or I.7A.011 to I.7A.015
I.7B.002	7D102	Integration 'software' as follows: a. Integration 'software' for the equipment specified
		 in I.7A.004.b.; b. Integration 'software' specially designed for the equipment specified in I.7A.004.a.;
		c. Integration 'software' designed

		or modified for the equipment specified in I.7A.004.c. Note: A common form of integration 'software' employs Kalman filtering.
I.7B.003	7D103	'Software' specially designed for modelling or simulation of the 'guidance sets' specified in I.7A.010 or for their design integration with the space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005. Note: 'Software' specified in I.7B.003 remains prohibited when combined with specially designed hardware specified in I.4A.003.
I.7B.004	<i>ex</i> 7E001	'Technology' according to the General Technology Note for the 'development' of equipment or 'software' specified in I.7A.001 to I.7A.015, or in I.7B.001 to I.7B.003.
I.7B.005	<i>ex</i> 7E002	'Technology' according to the General Technology Note for the 'production' of equipment specified in I.7A.001 to I.7A.015.
I.7B.006	7E101	'Technology' according to the General Technology Note for the 'use' of equipment specified in I.7A.001 to I.7A.015 or I.7B.001 to I.7B.003.
I.7B.007	7E102	'Technology' for protection of avionics and electrical subsystems against electromagnetic pulse (EMP) and electromagnetic interference (EMI) hazards, from external sources, as follows: a. Design 'technology' for shielding systems;

<i>Status: Point in time view as at 17/12/2009.</i>
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		b. c.	Design 'technology' for the configuration of hardened electrical circuits and subsystems; Design 'technology' for the determination of hardening criteria of I.7B.007.a. and I.7B.007.b.
I.7B.008	7E104	integrati control, propulsi manager	logy' for the on of the flight guidance, and on data into a flight ment system for ation of rocket system y.

I.9 AEROSPACE AND PROPULSION

I.9A

GOODS

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.9A.001	<i>ex</i> 9A004	Space launch vehicles N.B.: See also I.9A.005. For rockets and missiles see Military Goods Controls. <i>Note: I.9A.001 does not</i> <i>prohibit payloads.</i>
I.9A.002	9A011	Ramjet, scramjet or combined cycle engines and specially designed components therefor. N.B.: See also I.9A.012 and I.9A.016.
I.9A.003	<i>ex</i> 9A012.a	'Unmanned aerial vehicles' ('UAVs'), associated systems, equipment and components as follows: 'UAVs' having any of the following: Having all of the following:

a.	Having any of the following 1.	g: An autonomous flight control and navigation capability (e.g., an autopilot with an Inertial Navigation System); or
b.	2. Having any of	Capability of controlled- flight out of the direct vision range involving a human operator (e.g., televisual remote control); and
	the following 1.	g: Incorporating an aerosol dispensing system/ mechanism with a

		pesticides for crop dusting and dry chemicals for cloud seeding. 2. An aerosol dispensing system/ mechanism contains all those devices (mechanical, electrical, hydraulic, etc.), which are necessary for storage and dispersion of an aerosol into the atmosphere. This includes the possibility of aerosol injection into the combustion exhaust vapour and into the propeller slip stream
I.9A.004	9A101	Turbojet and turbofan engines (including turbocompound engines), as follows: a. Engines having both of the following characteristics: 1. Maximum thrust

		 value greater than 400 N (achieved un- installed) excluding civil certified engines with a maximum thrust value greater than 8 890 N (achieved un- installed), and 2. Specific fuel consumption of 0,15 kg/N/hr or less (at maximum continuous power at sea level static and standard conditions); Engines designed or modified for use in 'missiles'.
I.9A.005	9A104	Sounding rockets, capable of a range of at least 300 km. N.B.: See also I.9A.001. For rockets and missiles see Military Goods Controls.
I.9A.006	9A105	Liquid propellant rocket engines, as follows: N.B.: See also I.9A.017. a. Liquid propellant rocket engines usable in 'missiles', having a total impulse capacity

1.9A.007 9A106 Systems or components, usable in 'missiles', as follows, specially designed for liquid rocket propulsion systems: a. Ablative liners a. Ablative liners b. Rocket nozzles; c. Thrust vector control sub-systems; Technical Note: Examples of methods of achieving thrust vector control systemical in 1.9A.007.c. are: 1. Flexible nozzle; 2. Phild or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes); or			b.	than 1,1 Liquid p rocket ei usable in rocket sy unmann- vehicless of a rang km, other those sp I.9A.000 a total ir capacity	ropellant ngines, n complete ystems or ed aerial , capable ge of 300 er than ecified in 5.a., having
for thrust or combustion chambers; b. Rocket nozzles; c. Thrust vector control sub- systems; Technical Note: <i>Examples of</i> <i>achieving thrust</i> <i>vector control</i> <i>specified in</i> <i>I.9A.007.c. are:</i> 1. <i>Flexible</i> <i>nozzle;</i> 2. <i>Fluid or</i> <i>secondary</i> <i>gas</i> <i>injection;</i> 3. <i>Movable</i> <i>engine or</i> <i>nozzle;</i> 4. <i>Deflection</i> <i>of exhaust</i> <i>gas</i> <i>stream (jet</i> <i>vanes or</i> <i>probes);</i>	I.9A.007	9A106	usable in follows, for liquid	i 'missile: specially d rocket p	s', as designed
b. Rocket nozzles; c. Thrust vector control sub- systems; Technical Note: <i>Examples of</i> <i>methods of</i> <i>achieving thrust</i> <i>vector control</i> <i>specified in</i> <i>I.9A.007.c. are</i> : 1. <i>Flexible</i> <i>nozzle</i> ; 2. <i>Fluid or</i> <i>secondary</i> <i>gas</i> <i>injection</i> ; 3. <i>Movable</i> <i>engine or</i> <i>nozzle</i> ; 4. <i>Deflection</i> <i>of exhaust</i> <i>gas</i> <i>stream (jet</i> <i>vanes or</i> <i>probes);</i>			a.	for thrus combust	t or tion
c. Thrust vector control sub- systems; Technical Note: <i>Examples of</i> <i>achieving thrust</i> <i>vector control</i> <i>specified in</i> <i>I.9A.007.c. are:</i> 1. <i>Flexible</i> <i>nozzle;</i> 2. <i>Fluid or</i> <i>secondary</i> <i>gas</i> <i>injection;</i> 3. <i>Movable</i> <i>engine or</i> <i>nozzle;</i> 4. <i>Deflection</i> <i>of exhaust</i> <i>gas</i> <i>stream (jet</i> <i>vanes or</i> <i>probes);</i>			h		
control sub- systems; Technical Note: <i>Examples of</i> <i>methods of</i> <i>achieving thrust</i> <i>vector control</i> <i>specified in</i> <i>I.9A.007.c. are:</i> 1. <i>Flexible</i> <i>nozzle;</i> 2. <i>Fluid or</i> <i>secondary</i> <i>gas</i> <i>injection;</i> 3. <i>Movable</i> <i>engine or</i> <i>nozzle;</i> 4. <i>Deflection</i> <i>of exhaust</i> <i>gas</i> <i>stream (jet</i> <i>vanes or</i> <i>probes);</i>					
systems; Technical Note: Examples of methods of achieving thrust vector control specified in I.9A.007.c. are: 1. Flexible nozzle; 2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);			0.		
Technical Note:Examples ofmethods ofachieving thrustvector controlspecified inI.94.007.c. are:1.Flexiblenozzle;2.Fluid orgasinjection;3.Movableengine ornozzle;4.Deflectionof exhaustgasstream (jetvanes orprobes);					
methods of achieving thrust vector control specified in I.94.007.c. are: 1. Flexible nozzle; 2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
achieving thrust vector control specified in I.9A.007.c. are: 1. Flexible nozzle; 2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);				Example	es of
vector control specified in 1.9A.007.c. are: 1. Flexible nozzle; 2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
specified in I.9A.007.c. are: 1. Flexible nozzle; 2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
Image: Instant stateImage: Image:					
1. Flexible nozzle; 2. 2. Fluid or secondary gas injection; 3. 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);				· ·	
2. Fluid or secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
2.Fluid or secondary gas injection;3.Movable engine or nozzle;4.Deflection of exhaust gas stream (jet vanes or probes);				1.	
secondary gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);				2.	
gas injection; 3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
3. Movable engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
engine or nozzle; 4. Deflection of exhaust gas stream (jet vanes or probes);					
A. Deflection of exhaust gas stream (jet vanes or probes);				3.	
4. Deflection of exhaust gas stream (jet vanes or probes);					
of exhaust gas stream (jet vanes or probes);				1	
gas stream (jet vanes or probes);				⊣.	
stream (jet vanes or probes);					
vanes or probes);					
probes);					
					or

	5.	Thrust
d.	Liquid an slurry pro (including oxidisers) systems, specially compone therefor, o or modifi operate in environm greater th <i>rms betw</i> and 2 kH <i>Note: The</i> <i>servo val</i> <i>pumps sp</i> <i>1.9A.007.</i> <i>following</i> a.	tabs. ad opellant g) control and designed nts designed ed to n vibration tents an 10 g een 20 Hz z. e only ves and ecified in d., are the
		Pumps,
		for liquid propellants, with shaft speeds equal to or greater than 8 000 r.p.m.

1.9A.008	9A107 and <i>ex</i> 9A007.a	or with discharge pressures equal to or greater than 7 MPa. Solid propellant rocket
I.9A.008	9A107 and ex 9A007.a	engines, usable in complete rocket systems or unmanned aerial vehicles, capable of a range of 300 km, having total impulse capacity equal to or greater than 0,841 MNs. N.B.: See also I.9A.017.
I.9A.009	9A108	Components usable in 'missiles', as follows, specially designed for solid rocket propulsion systems: a. Rocket motor cases and 'insulation' components therefor; b. Rocket nozzles; c. Thrust vector control sub- systems. Technical Note: <i>Examples of</i> <i>methods of</i> <i>achieving thrust</i> <i>vector control</i> <i>specified in</i> <i>I.9A.009.c. are:</i> 1. <i>Flexible</i> <i>nozzle;</i> 2. <i>Fluid or</i> <i>secondary</i> <i>gas</i> <i>injection;</i> 3. <i>Movable</i> <i>engine or</i> <i>nozzle;</i> 4. <i>Deflection</i> <i>of exhaust</i> <i>gas</i> <i>stream (jet</i> <i>vanes or</i> <i>probes);</i> <i>or</i>

		5. Thrust tabs.
I.9A.010	9A109	Hybrid rocket motors, usable in 'missiles', and specially designed components therefor. N.B.: See also I.9A.017. Technical Note: In I.9A.010 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.9A.011	9A110	Composite structures, laminates and manufactures thereof, specially designed for use in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005 or the subsystems specified in I.9A.006.a., I.9A.007 to I.9A.009, I.9A.014 or I.9A.017. N.B.: See also Military Goods Controls for composite structures, laminates and manufactures thereof, for rockets and missiles.
I.9A.012	<i>ex</i> 9A111*	Pulse jet engines, usable in 'missiles', and specially designed components therefor. N.B.: See also I.9A.002 and I.9A.016.
I.9A.013	9A115	Launch support equipment as follows: N.B.: See also Military Goods Controls for launch support equipment for rockets and missiles. a. Apparatus and devices for handling, control, activation or launching, designed or modified for space launch vehicles specified in I.9A.001, unmanned aerial

		vehicles specified in I.9A.003 or sounding rockets specified in I.9A.005; b. Vehicles for transport, handling, control, activation or launching, designed or modified for space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005.	
I.9A.014	9A116	Reentry vehicles, usable in 'missiles', and equipment designed or modified therefor, as follows:a.Reentry vehicles;b.Heat shields and components therefor fabricated of ceramic or ablative materials;c.Heat sinks and components therefor fabricated of light-weight, high heat capacity materials;d.Electronic equipment specially designed for reentry vehicles.	
I.9A.015	9A117	Staging mechanisms, separation mechanisms, and interstages, usable in 'missiles'.	
I.9A.016	<i>ex</i> 9A118*	Devices to regulate combustion usable in engines, which are usable in 'missiles', specified in I.9A.002 or I.9A.012.	
I.9A.017	9A119	Individual rocket stages, usable in complete rocket systems or unmanned aerial vehicles, capable of a range of 300 km, other than those	

		specified in I.9A.006, I.9A.008 and I.9A.010.
I.9A.018	9A120	Liquid propellant tanks specially designed for propellants specified in I.1A.029 or 'other liquid propellants', used in rocket systems capable of delivering at least a 500 kg payload to a range of at least 300 km. Note: In I.9A.018 'other liquid propellants' includes, but is not limited to, propellants specified in the Military Goods Controls
I.9A.019		(reserved)
I.9A.020	<i>ex</i> 9B105*	Wind tunnels for speeds of Mach 0,9 or more, usable for 'missiles' and their subsystems.
I.9A.021	9B106	Environmental chambers and anechoic chambers, as follows: a. Environmental chambers capable of simulating the following flight conditions: 1. Vibration environments equal to or greater than 10 g rms, measured 'bare table', between 20 Hz and 2 kHz imparting forces equal to or greater than 5 kN; and 2. Altitude equal to or greater than 15 km; or

	3. Technica	Temperature range of at least 223 K (- 50 °C) to 398 K (+ 125 °C); l Notes:
	1.	I.9A.021.a. describes systems that are capable of generating a vibration environment with a single wave (e.g., a sine wave) and systems capable of generating a broad band random vibration (i.e., power spectrum);
b.	Environn	s capable
	of simula following condition 1.	ting the g flight

Status: Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

		2. 3.	sound pressure level of 140 dB or greater (referenced to 20 μ Pa) or with a total rated acoustic power output of 4 kW or greater; and Altitude equal to or greater than 15 km; or Temperature range of at least 223 K (- 50 °C) to 398 K (+ 125 °C).
I.9A.022	<i>ex</i> 9B115	Specially designed 'production equip the systems, sub-s and components s I.9A.002, I.9A.00 to I.9A.010, I.9A. I.9A.014 to I.9A.0	ment' for systems pecified in 4, I.9A.006 012,
I.9A.023	<i>ex</i> 9B116	Specially designed 'production facilit the space launch v specified in I.9A.0 systems, sub-syste components speci I.9A.002, I.9A.00 to I.9A.010, I.9A. I.9A.014 to I.9A.0 N.B.: See also Mi Goods Controls fo 'production facilit rockets and missil	ties' for vehicles 001, or ems, and fied in 4, I.9A.005 012, or 017. litary or ties' for
I.9A.024	<i>ex</i> 9B117*	Test benches and for solid or liquid rockets or rocket r	propellant

		having either of the following characteristics: The capacity to handle more than 90 kN of thrust; or Capable of simultaneously measuring the three axial thrust components.
I.9A.025	9C108	'Insulation' material in bulk form and 'interior lining', for rocket motor cases usable in 'missiles' or specially designed for 'missiles'. Technical Note: In I.9A.025 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.
I.9A.026	9C110	Resin impregnated fibre prepregs and metal coated fibre preforms therefor, for composite structures, laminates and manufactures specified in I.9A.011, made either with organic matrix or metal matrix utilising fibrous or filamentary reinforcements having a 'specific tensile strength' greater than 7,62 \times 10 ⁴ m and a 'specific modulus' greater than 3,18 \times 10 ⁶ m. N.B.: See also I.1A.024 and I.1A.034. <i>Note: The only resin</i> <i>impregnated fibre prepregs</i> <i>specified in entry I.9A.026</i> <i>are those using resins</i> <i>with a glass transition</i> <i>temperature (T_g), after cure,</i> <i>exceeding 418 K (145 °C) as</i> <i>determined by ASTM D4065</i> <i>or equivalent.</i>

I.9B

TECHNOLOGY, INCLUDING SOFTWARE

No	Relevant item(s) from Annex to Regulation (EC) No 1183/2007	Description
I.9B.001	<i>ex</i> 9D001	'Software' specially designed or modified for the 'development' of equipment or 'technology' specified in I.9A.002, I.9A.009, I.9A.012, I.9A.015 or I.9A.016.
I.9B.002	9D101	'Software' specially designed or modified for the 'use' of goods specified in I.9A.020, I.9A.021, I.9A.023 or I.9A.024.
I.9B.003	9D103	'Software' specially designed for modelling, simulation or design integration of the space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005, or the subsystems specified in I.9A.006.a., I.9A.007, I.9A.009, I.9A.014 or I.9A.017. <i>Note:</i> 'Software' specified in I.9B.003 remains prohibited when combined with specially designed hardware specified in I.4A.003.
I.9B.004	<i>ex</i> 9D104	'Software' specially designed or modified for the 'use' of [^{x1} goods specified in I.9A.002], I.9A.004, I.9A.006, I.9A.007.c., I.9A.007.d., I.9A.008, I.9A.009.c., I.9A.010, I.9A.012, I.9A.013.a., I.9A.014.d., I.9A.015 or I.9A.016.
I.9B.005	9D105	'Software' which coordinates the function of more than one subsystem, specially designed or modified for 'use' in space launch vehicles specified in I.9A.001 or sounding rockets specified in I.9A.005.

I.9B.006	<i>ex</i> 9E001	'Technology' according to the General Technology Note for the 'development' of equipment or 'software' specified in I.9A.001, I.9A.003, I.9A.021 to I.9A.024, or I.9B.002 to I.9B.005.
I.9B.007	<i>ex</i> 9E002	'Technology' according to the General Technology Note for the 'production' of equipment specified in I.9A.001, I.9A.003 or I.9A.021 to I.9A.024.
I.9B.008	9E101	'Technology' according to the General Technology Note for the 'development' or 'production' of goods specified in I.9A.004 to I.9A.017.
I.9B.009	<i>ex</i> 9E102	'Technology' according to the General Technology Note for the 'use' of space launch vehicles specified in I.9A.001, or goods specified in I.9A.002, I.9A.004 to I.9A.017, I.9A.020 to I.9A.024, I.9B.002 or I.9B.003.]

Editorial Information

X1 Substituted by Corrigendum to Commission Regulation (EC) No 116/2008 of 28 January 2008 amending Council Regulation (EC) No 423/2007 concerning restrictive measures against Iran (Official Journal of the European Union L 35 of 9 February 2008).

[^{F2}ANNEX IA

'Goods and technology referred to in Article 2(1) point (a)(iii)' INTRODUCTORY NOTES

- 1. Unless otherwise stated, reference numbers used in the column entitled 'Description' refer to the descriptions of dual-use items and technology set out in Annex I to Regulation (EC) No 1334/2000.
- 2. A reference number in the column entitled 'Related item from Annex I to Regulation (EC) No 1183/2007' means that the characteristics of the item described in the column

'Description' lie outside the parameters set out in the description of the dual-use entry referred to.

- 3. Definitions of terms between 'single quotation marks' are given in a technical note to the relevant item.
- 4. Definitions of terms between 'double quotation marks' can be found in Annex I to Regulation (EC) No 1183/2007.

General Notes

- 1. The object of the prohibitions contained in this Annex should not be defeated by the export of any non-prohibited goods (including plant) containing one or more prohibited components when the prohibited component or components are the principal element of the goods and can feasibly be removed or used for other purposes.
- *N.B.:* In judging whether the prohibited component or components are to be considered the principal element, it is necessary to weigh the factors of quantity, value and technological know-how involved and other special circumstances which might establish the prohibited component or components as the principal element of the goods being procured.

2. Goods specified in this Annex include both new and used goods.

General Technology Note (GTN)(To be read in conjunction with Section IA.B.)

- 1. The sale, supply, transfer or export of 'technology' which is 'required' for the 'development', 'production' or 'use' of goods the sale, supply, transfer or export of which is prohibited in Part A (Goods) below, is prohibited in accordance with the provisions of Section IA.B.
- 2. The 'technology' required' for the 'development', 'production' or 'use' of prohibited goods remains under prohibition even when applicable to non-prohibited goods.
- 3. Prohibitions do not apply to that 'technology' which is the minimum necessary for the installation, operation, maintenance (checking) and repair of those goods which are not prohibited or the export of which has been authorised in accordance with Regulation (EC) No 423/2007.
- 4. Prohibitions on 'technology' transfer do not apply to information 'in the public domain', to 'basic scientific research' or to the minimum necessary information for patent applications.
- IA.A. GOODS

A0.

No	Description	Related item from Annex I to Regulation (EC) No 1183/2007
IA.A0.001	Hollow cathode lamps as follows: a. Iodine hollow cathode lamps with windows in pure silicon or quartz	_

NUCLEAR MATERIALS, FACILITIES, AND EQUIPMENT

	b. Uranium hollow cathode lamps	
IA.A0.005	Nuclear reactor vessel components and testing equipment, other than those specified in 0A001, as follows: 1. Seals 2. Internal components 3. Sealing, testing and measurement equipment	0A001
IA.A0.006	Nuclear detection systems for detection, identification or quantification of radioactive materials and radiation of nuclear origin and specially designed components thereof other than those specified in 0A001.j. or 1A004.c.	0A001.j 1A004.c
IA.A0.007	Bellows-sealed valves made of aluminium alloy or stainless steel type 304, 304L or 316L. Note: This item does not cover bellow valves defined in 0B001.c.6 and 2A226.	0B001.c.6 2A226
IA.A0.012	Shielded enclosures for the manipulation, storage and handling of radioactive substances (Hot cells).	0B006
IA.A0.013	'Natural uranium' or 'depleted uranium' or thorium in the form of metal, alloy, chemical compound or concentrate and any other material containing one or more of the foregoing, other than those specified in 0C001.	0C001

A1.

MATERIALS, CHEMICALS, 'MICROORGANISMS' AND 'TOXINS'

No	Description	Related item from Annex I to Regulation (EC) No 1183/2007
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	7	1
IA.A1.001	Bis(2-ethylhexyl) phosphoric acid (HDEHP or D2HPA) CAS 298-07-7 solvent in any quantity, with a purity greater than 90 %.	_
IA.A1.002	Fluorine gas (Chemical Abstract Number (CAS): 7782-41-4), with a purity of at least 95 %.	_
IA.A1.005	Electrolytic cells for fluorine production with an output capacity greater than 100 g of fluorine per hour. Note: This item does not cover electrolytic cells defined in item 1B225.	1B225
IA.A1.008	Magnetic metals, of all types and of whatever form, having an initial relative permeability of 120 000 or more and a thickness between 0,05 and 0,1 mm.	1C003.a
IA.A1.009	$\begin{bmatrix} F^4 & Fibrous or filamentary materials' or prepregs, as follows: a. Carbon or aramid 'fibrous or filamentary materials' having either of the following characteristics: 1. A 'specific modulus' exceeding 10 × 106 m; or 2. A 'specific tensile strength' exceeding 17 × 104 m; b. Glass 'fibrous or filamentary materials'$	1C010.a 1C010.b 1C210.a 1C210.b
	having either of	

	the following characteristics:	
	1. A	
	'specific	
	modulus'	
	exceeding	
	$3,18 \times 10^{6}$	
	m; or	
	2. A	
	'specific	
	tensile	
	strength'	
	exceeding	
	$76,2 \times 10^3$	
	m; c. Thermoset resin-	
	c. Thermoset resin- impregnated	
	continuous 'yarns',	
	'rovings', 'tows' or	
	'tapes' with a width	
	of 15 mm or less	
	(once prepregs),	
	made from carbon	
	or glass 'fibrous	
	or filamentary materials' other	
	than those specified	
	in IA.A1.010.a. or	
	b.	
	Note: This item does not	
	cover 'fibrous or filamentary	
	materials' defined in items	
	1C010.a, 1C010.b, 1C210.a	
	and 1C210.b.]	
IA.A1.010	[^{F4} Resin-impregnated	1C010.e.
	or pitch-impregnated	1C210
	fibres (prepregs), metal	
	or carboncoated fibres	
	(preforms) or 'carbon fibre	
	preforms', as follows: a. Made from 'fibrous	
	or filamentary	
	materials' specified	
	in IA.A1.009	
	above;	
	b. Epoxy resin	
	'matrix'	
	impregnated	
	carbon 'fibrous or filamentary	
	materials'	
	(prepregs),	
	(Propress),	l

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<i>Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)</i>		
	specified in 1C010.a, 1C010.b or 1C010.c, for the repair of aircraft structures or laminates, of which the size of individual sheets does not exceed 50 cm × 90 cm; c. Prepregs specified in 1C010.a, 1C010.b or 1C010.c, when impregnated with phenolic or epoxy resins having a glass transition temperature (Tg) less than 433 K (160 °C) and a cure temperature lower than the glass transition temperature. Note: This item does not cover 'fibrous or filamentary materials' defined in item 1C010.e.]	
IA.A1.011	Reinforced silicon carbide ceramic composites usable for nose tips, re-entry vehicles, nozzle flaps, usable in 'missiles', other than those specified in 1C107.	1C107
IA.A1.012	Maraging steels, other than those specified in 1C116 or 1C216, 'capable of' an ultimate tensile strength of 2 050 MPa or more, at 293 K (20 °C). Technical note: The phrase 'maraging steel capable of' encompasses maraging steel before or after heat treatment.	1C216
IA.A1.013	Tungsten, tantalum, tungsten carbide, tantalum carbide and alloys, having both of the following characteristics: a. In forms having a hollow cylindrical	1C226

	or spherical	
	symmetry	
	(including cylinder	
	segments) with an	
	inside diameter	
	between 50 mm and	
	300 mm; and	
b.	A mass greater than	
	5 kg.	
Not	te: This item does not	
cov	er tungsten, tungsten	
car	bide and alloys defined in	
iter	n 1C226.	

A2.

MATERIALS PROCESSING

	I to Regulation (EC) No 1183/2007
 a system at an acceleration equal to or greater than 0,1g rms between 0,1 Hz and 2 kHz and imparting forces equal to or greater than 50 kN, measured 'bare table'; b. Digital controllers, combined with specially designed vibration test 'software', with a real-time bandwidth greater than 5 kHz 	
	 equipment and components thereof, other than those specified in 2B116: a. Vibration test systems employing feedback or closed loop techniques and incorporating a digital controller, capable of vibrating a system at an acceleration equal to or greater than 0,1g rms between 0,1 Hz and 2 kHz and imparting forces equal to or greater than 50 kN, measured 'bare table'; b. Digital controllers, combined with specially designed vibration test 'software', with a real-time bandwidth

	Status: Point in time view as at 17/12/2009. ges to legislation: There are currently no known outstanding effects for the Regulation (EC) No 423/2007 (repealed). (See end of Document for details)
Councu	Regulation (EC) 110 425/2007 (repeated). (See end of Document for details)
	 systems specified in a.; c. Vibration thrusters (shaker units), with or without associated amplifiers, capable of imparting a force equal to or greater than 50 kN, measured 'bare table', and usable in vibration test systems specified in a.; d. Test piece support structures and electronic units designed to combine multiple shaker units in a system capable of providing an effective combined force equal to or
	greater than 50 kN, measured 'bare table', and usable in vibration systems specified in a. Technical note: 'Bare table' means a flat table, or surface, with no fixture or fittings.
IA.A2.004	Remote manipulators that can be used to provide remote actions in radiochemical separation operations or hot cells, other than those specified in 2B225, having either of the following characteristics: a. A capability of penetrating a hot cell wall of 0,3 m or more (through the wall operation); or2B225b.A capability of bridging over the top of a hot cell wall with a thickness of 0,3 m2B225

	or more (over the wall operation). Technical note: Remote manipulators provide translation of human operator actions to a remote operating arm and terminal fixture. They may be of master/slave type or operated by joystick or keypad.	
IA.A2.011	Centrifugal separators, capable of continuous separation without the propagation of aerosols and manufactured from: 1. Alloys with more than 25 % nickel and 20 % chromium by weight; 2. Fluoropolymers; 3. Glass (including vitrified or enamelled coating or glass lining); 4. Nickel or alloys with more than 40 % nickel by weight; 5. Tantalum or tantalum alloys; 6. Titanium or zirconium or zirconium alloys. Note: This item does not cover centrifugal separators defined in item 2B352.c.	2B352.c
IA.A2.012	Sintered metal filters made of nickel or nickel alloy with more than 40 % nickel by weight. Note: This item does not cover filters defined in item 2B352.d.	2B352.d

A3.

ELECTRONICS

No	Description	Related item from Annex I to Regulation (EC) No 1183/2007

IA.A3.001	 High voltage direct current power supplies having both of the following characteristics: a. Capable of continuously producing, over a time period of eight hours, 10 kV or more, with output power of 5 kW or more with or without sweeping; and b. Current or voltage stability better than 0,1 % over a time period of four hours.
	Note: This item does not cover power supplies defined in items 0B001.j.5 and 3A227.
IA.A3.002	Mass spectrometers, other than those specified in 3A233 or 0B002.g, capable of measuring ions of 200 atomic mass units or more and having a resolution of better than 2 parts in 200, as follows, and ion sources thereof: a. Inductively coupled plasma mass
	 spectrometers (ICP/ MS); b. Glow discharge mass spectrometers (GDMS); c. Thermal ionisation
	c. Thermal ionisation mass spectrometers (TIMS); d. Electron bombardment mass spectrometers which have a source chamber
	constructed from, lined with or plated with 'materials resistant to corrosion

e.	Molecula	ride UF ₆ '; ar beam ctrometers ither of wing istics: A source chamber constructed from, lined with or plated with stainless steel or molybdenut and equipped with a cold trap capable of cooling to 193 K (– 80°C) or less; or A source	n
		chamber constructed from, lined with or plated with 'materials resistant to corrosion by uranium hexafluorid (UF ₆)';	e
f.	equipped microflue	ectrometers with a prination be designed des or	

A6.

SENSORS AND LASERS

No	Description	Related item from Annex I to Regulation (EC) No 1183/2007
IA.A6.001	Yttrium aluminium garnet (YAG) rods	-
IA.A6.003	Wave front corrector systems for use with a laser beam having a diameter exceeding 4 mm, and specially designed components thereof, including control systems, phase front sensors and 'deformable mirrors' including bimorph mirrors. Note: This item does not cover mirrors defined in 6A004.a, 6A005.e and 6A005.f.	6A003
IA.A6.004	Argon ion 'lasers' having an average output power equal to or greater than 5 W. Note: This item does not cover argon ion 'lasers' defined in items 0B001.g.5, 6A005 and 6A205.a.	6A005.a.6 6A205.a
IA.A6.006	Tunable semiconductor 'lasers' and tunable semiconductor 'laser' arrays, of a wavelength between 9 μm and 17 μm, as well as array stacks of semiconductor 'lasers' containing at least one tunable semiconductor 'laser' array of such wavelength. Notes:1.Semiconductor 'lasers' are commonly called 'laser' diodes.2.This item does not cover semiconductor 'lasers' defined in	6A005.b

	items 0B001.h.6 and 6A005.b	
IA.A6.008	Neodymium-doped (other than glass) 'lasers', having an output wavelength greater than 1 000 nm but not exceeding 1 100 nm and output energy exceeding 10 J per pulse. Note: This item does not cover neodymium-doped (other than glass) 'lasers' defined in item 6A005.c.2.b.	6A005.c.2
IA.A6.010	Radiation-hardened cameras, or lenses thereof, other than those specified in $6A203.c.$, specially designed, or rated as radiation-hardened, to withstand a total radiation dose greater than 50×10^3 Gy(silicon) (5×10^6 rad (silicon)) without operational degradation. Technical note: The term Gy(silicon) refers to the energy in Joules per kilogram absorbed by an unshielded silicon sample when exposed to ionising radiation.	6A203.c
IA.A6.011	Tunable pulsed dye laser amplifiers and oscillators, having all of the following characteristics:1.Operating at wavelengths between 300 nm and 800 nm;2.An average output power greater than 10 W but not exceeding 30 W;3.A repetition rate greater than 1 kHz; and4.Pulse width less than 100 ns.Notes:1.1.This item does not cover single mode oscillators.	6A205.c

	es to legislation: The	oint in time view as at 17/12/2009 re are currently no known outsta 23/2007 (repealed). (See end of a	nding effects for the
	2.	This item does not cover tunable pulsed dye laser amplifiers and oscillators defined in item 6A205.c, 0B001.g.5 and 6A005.	
IA.A6.012	 'lasers follow 1. 2. 3. 4. Note: 'not co dioxid oscilla 	l carbon dioxide ' having all of the ing characteristics: Operating at wavelengths between 9 000 nm and 11 000 nm; A repetition rate greater than 250 Hz; An average output power greater than 100 W but not exceeding 500 W; and Pulse width less than 200 ns. This item does ver pulsed carbon e laser amplifiers and tors defined in item 5.d., 0B001.h.6. and 5.d.	6A205.d

IA.B. TECHNOLOGY

No	Description	Related item from Annex I to Regulation (EC) No 1183/2007
IA.B.001	Technology required for the development, production, or use of the items in Part IA.A. (Goods) above.	-]

[^{F4}ANNEX II

Goods and technology referred to in Article 3 **INTRODUCTORY NOTES**

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Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)	

- 1. Unless otherwise stated, reference numbers used in the column below entitled 'Description' refer to the descriptions of dual use items and technology set out in Annex I to Regulation (EC) No 428/2009.
- 2. A reference number in the column below entitled 'Related item from Annex I to Regulation (EC) No 428/2009' means that the characteristics of the item described in the 'Description' column lie outside the parameters set out in the description of the dual use entry referred to.
- 3. Definitions of terms between 'single quotation marks' are given in a technical note to the relevant item.
- 4. Definitions of terms between 'double quotation marks' can be found in Annex I to Regulation (EC) No 428/2009.

GENERAL NOTES

1. The object of the controls contained in this Annex should not be defeated by the export of any non-controlled goods (including plant) containing one or more controlled components when the controlled component or components is/are the principal element of the goods and can feasibly be removed or used for other purposes.

N.B.: In judging whether the controlled component or components is/are to be considered the principal element, it is necessary to weigh the factors of quantity, value and technological knowhow involved and other special circumstances which might establish the controlled component or components as the principal element of the goods being procured.

2. Goods specified in this Annex include both new and used goods.

GENERAL TECHNOLOGY NOTE (GTN)(To be read in conjunction with Section II.B)

- 1. The sale, supply, transfer or export of 'technology' which is 'required' for the 'development', 'production' or 'use' of goods the sale, supply, transfer or export of which is controlled in Part A (Goods) below, is controlled in accordance with the provisions of Section II.B.
- 2. The 'technology' required' for the 'development', 'production' or 'use' of goods under control remains under control even when it is applicable to non-controlled goods.
- 3. Controls do not apply to that 'technology' which is the minimum necessary for the installation, operation, maintenance (checking) and repair of those goods which are not controlled or the export of which has been authorised in accordance with Regulation (EC) No 423/2007.
- 4. Controls on 'technology' transfer do not apply to information 'in the public domain', to 'basic scientific research' or to the minimum necessary information for patent applications.
- II.A. GOODS

A0.

NUCLEAR MATERIALS, FACILITIES, AND EQUIPMENT

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
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	1 ¹	
II.A0.002	Faraday isolators in the wavelength range 500 nm – 650 nm	
II.A0.003	Optical gratings in the wavelength range 500 nm – 650 nm	
II.A0.004	Optical fibres in the wavelength range 500 nm – 650 nm coated with anti- reflecting layers in the wavelength range 500 nm – 650 nm and having a core diameter greater than 0,4 mm but not exceeding 2 mm	
II.A0.008	Laser mirrors, other than those specified in 6A005.e, consisting of substrates having a thermal expansion coefficient of 10 ⁻⁶ K ⁻¹ or less at 20°C (e.g. fused silica or sapphire). Note: This item does not cover optical systems specially designed for astronomical applications, except if the mirrors contain fused silica.	0B001.g.5, 6A005.e
II.A0.009	Laser lenses, other than those specified in 6A005.e.2, consisting of substrates having a thermal expansion coefficient of 10^{-6} K- ¹ or less at 20°C (e.g. fused silica).	0B001.g, 6A005.e.2
II.A0.010	Pipes, piping, flanges, fittings made of, or lined with, nickel or nickel alloy containing more than 40 % nickel by weight, other than those specified in 2B350.h.1.	2B350
II.A0.011	Vacuum pumps other than those specified in 0B002.f.2., or 2B231, as follows: Turbomolecular pumps having a flowrate equal to or greater than 400 l/s, Roots type vacuum roughing pumps having a volumetric	0B002.f.2, 2B231

	aspiration flowrate greater than 200m ³ / h. Bellows-sealed, scroll, dry compressor, and bellows-sealed, scroll, dry vacuum pumps.	
II.A0.014	Detonation chambers having a capacity of explosion absorption of more than 2.5kg TNT equivalent.	

A1.

MATERIALS, CHEMICALS, 'MICRO-ORGANISMS' AND 'TOXINS'

No	Description Related item from Annex I to Regulat (EC) No 428/2009
II.A1.003	Ring-shaped seals and gaskets, having an inner diameter of 400mm or less, made of any of the following materials: a. Copolymers of vinylidene fluoride having 75 % or more beta crystalline structure without stretching; b. Fluorinated polyimides containing 10 % by weight or more of combined fluorine; c. Fluorinated phosphazene elastomers containing 30 % by weight or more of combined fluorine; d. Polychlorotrifluoroethylene (PCTFE, e.g. Kel-F ®); e. Fluoro-elastomers (e.g., Viton ®, Tecnoflon ®); f. Polytetrafluoroethylene (PTFE).

II.A1.004	Personal equipment for detecting radiation of nuclear origin, including personal dosimeters. Note: This item does not cover nuclear detection systems defined in item 1A004.c.	1A004.c
II.A1.006	Catalysts, other than those prohibited by I.1A.003, containing platinum, palladium or rhodium, usable for promoting the hydrogen isotope exchange reaction between hydrogen and water for the recovery of tritium from heavy water or for the production of heavy water.	1B231, 1A225
II.A1.007	Aluminium and its alloys, other than those specified in 1C002.b.4 or 1C202.a, in crude or semi-fabricated form having either of the following characteristics: a. Capable of an ultimate tensile strength of 460 MPa or more at 293 K (20 °C); or b. Having a tensile strength of 415 MPa or more at 298 K (25 °C).	1C002.b.4, 1C202.a
II.A1.014	Elemental powders of cobalt, neodymium or samarium or alloys or mixtures thereof containing at least 20 % by weight of cobalt, neodymium or samarium, with a particle size less than 200 µm.	
II.A1.015	Pure tributyl phosphate (TBP) [CAS No 126-73-8] or any mixture having a TBP content of more than 5 % by weight.	
II.A1.016	Maraging steel, other than those prohibited by I.1A.030, I.1A.035 or IA.A1.012 Technical Note:	

	Maraging steels are iron alloys generally characterised by high nickel, very low carbon content and the use of substitutional elements or precipitates to produce strengthening and age-hardening of the alloy.
II.A1.017	Metals, metal powders and material as follows: a. Tungsten and tungsten alloys, other than those prohibited by I.1A.031, in the form of uniform spherical or atomized particles of 500µm diameter or less with a tungsten content of 97 % by weight or more; b. Molybdenum and molybdenum alloys, other than those prohibited by I.1A.031, in the form of uniform spherical or atomized particles of 500 µm diameter or less with a molybdenum content of 97 % by weight or more; c. Tungsten materials in the solid form, other than those prohibited by I.1A.037, or IA.A1.013 having material compositions as follows: 1. Tungsten and alloys containing 97 % by weight or more of tungsten;

	Status: Point in time view as at 17/12/2009. Is to legislation: There are currently no known outstanding effects for the Pegulation (EC) No 423/2007 (repealed). (See end of Document for details)
Council	2. Copper infiltrated tungsten containing 80 % by weight or more of tungsten; or 3. Silver infiltrated tungsten containing 80 % by weight or more of ungsten containing 80 % by weight or
II.A1.018	tungsten. Soft magnetic alloys having a chemical composition as follows: a) Iron content between 30 % and 60 %, and b) Cobalt content between 40 % and 60 %.
П.А1.019	 'Fibrous or filamentary materials' or prepregs, not prohibited by Annex I or by Annex IA (under IA.A1.009, IA.A1.010) of this Regulation, or not specified by Annex I of Regulation (EC) No 428/2009, as follows: a) Carbon 'fibrous or filamentary materials'; Note: II.A1.019a. does not cover fabrics. b) Thermoset resin- impregnated continuous 'yarns', 'rovings', 'tows', or 'tapes', made from carbon 'fibrous or filamentary materials'; c) Polyacrylonitrile (PAN) continuous

Status: Point in time view as at 17/12/2009.

Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)

'yarns', 'rovings', 'tows' or 'tapes'

A2.

MATERIALS PROCESSING

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
II.A2.002	Machine tools for grinding having positioning accuracies with 'all compensations available' equal to or less (better) than 15 µm according to ISO 230/2 (1988) (1) or national equivalents along any linear axis. Note: This item does not cover machine tools for grinding defined in items 2B201.b and 2B001.c.	2B201.b, 2B001.c
II.A2.002a	Components and numerical controls, specially designed for machine tools specified in 2B001, 2B201, or II.A2.002 above.	
II.A2.003	Balancing machines and related equipment as follows:a.Balancing machines, designed or modified for dental or other medical equipment, having all the following characteristics:1.Not capable of balancing rotors/ assemblies having a mass greater than 3 kg;2.Capable of balancing rotors/ assemblies having a mass greater than 3 kg;	

	Status: Point in time view as at 17/12/2009. ges to legislation: There are currently no known outstanding effects for the Regulation (EC) No 423/2007 (repealed). (See end of Document for details)
	Regulation (EC) No 423/2007 (repealed). (See end of Document for details) greater than 12 500 rpm; 3. Capable of correcting imbalance in two planes or more; and 4. Capable of balancing to a residual specific imbalance
	of 0,2 g × mm per kg of rotor mass; b. Indicator heads designed or modified for use with machines specified in a. above. <i>Technical Note:</i> <i>Indicator heads are</i> <i>sometimes known as</i> <i>balancing instrumentation.</i>
II.A2.005	Controlled atmosphere heat treatment furnaces, as follows: Furnaces capable of operation at temperatures above 400 °C.
II.A2.006	Oxidation furnaces capable of operation at temperatures above 400 °C Note: This item does not cover tunnel kilns with roller or car conveyance, tunnel kilns with conveyor belt, pusher type kilns or shuttle kilns, specially designed for the production of glass, tableware ceramics or structural ceramics.
II.A2.007	'Pressure transducers', 2B230 other than those defined in 2B230, capable of measuring absolute pressures at any

	point in the range 0 to 200 kPa and having both of the	
	following characteristics: a. Pressure sensing elements made of or protected by 'Materials resistant to corrosion by uranium hexafluoride	
	(UF ₆)', and b. Having either of the following	
	characteristics: 1. A full scale of less than 200 kPa and an 'accuracy' of better than \pm 1 % of full scale; or 2. A full	
	scale of 200 kPa or greater and an 'accuracy' of better than 2 kPa.	
	Technical Note: For the purposes of 2B230, 'accuracy' includes non- linearity, hysteresis and repeatability at ambient temperature.	
II.A2.008	Liquid-liquid contacting equipment (mixer-settlers, pulsed columns, centrifugal contactors); and liquid distributors, vapour distributors or liquid collectors designed for such equipment, where all surfaces that come in direct contact with the chemical(s) being processed are made from any of the following materials:	2B350.e

1= (10 (000)

Changes to legisla	ation: There are currently no known outstan	ding effects for the
Changes to legisla	 Alloys with more than 25 % nickel and 20 % chromium by weight; Fluoropolymers; Glass (including vitrified or enamelled coating or glass lining); Graphite or 'carbon graphite'; Nickel or alloys with more than 40 % nickel by weight; Tantalum or tantalum alloys; Zirconium or zirconium alloys; or 9. 	ding effects for the
	<i>Technical Note:</i> <i>'Carbon graphite' is a</i>	
	composition consisting of amorphous carbon and graphite, in which the graphite content is 8 % or more by weight.	
II.A2.009	Industrial equipment and components, other than those specified in 2B350.d, as follows: Heat exchangers or condensers with a heat transfer surface area greater than 0,05 m ² , and less than 30 m ² ; and tubes, plates, coils or blocks (cores) designed for such heat exchangers or condensers, where all surfaces that come in direct contact with the fluid(s) are made from any of the following materials: 1. Alloys with more than 25 % nickel and 20 % chromium by weight; 2. Fluoropolymers; 3. Glass (including vitrified or	2B350.d

Status: Point in time view as at 17/12/2009.
Changes to legislation: There are currently no known outstanding effects for the
<i>Council Regulation (EC) No</i> 423/2007 (repealed). (See end of Document for details)

	enamelled coating	
	or glass lining);	
	4. Graphite or 'carbon	
	graphite';	
	5. Nickel or alloys	
	with more than	
	40 % nickel by	
	weight;	
	6. Tantalum or	
	tantalum alloys;	
	7. Titanium or	
	titanium alloys;	
	8. Zirconium or	
	2. zirconium alloys;9. Silicon carbide;	
	10. Titanium carbide; or	
	11. Stainless steel.	
	Note: This item does not	
	cover vehicle radiators.	
	Technical Note:	
	The materials used for	
	gaskets and seals and other	
	implementation of sealing	
	functions do not determine	
	the status of control of the	
	heat exchanger.	
II.A2.010	Multiple-seal, and seal-less	2B350.d
II.A2.010	pumps, other than those	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow-	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C)	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa)	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers,	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers,	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in	2B350.d
Ш.А2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come	2B350.d
Ш.А2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come in direct contact with the	2B350.d
Ш.А2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come in direct contact with the chemical(s) being processed	2B350.d
II.A2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come in direct contact with the chemical(s) being processed are made from any of the following materials: 1. Alloys with more	2B350.d
П.А2.010	pumps, other than those specified in 2B350.i, suitable for corrosive fluids, with manufacturer's specified maximum flow-rate greater than 0,6 m ³ /hour, or vacuum pumps with manufacturer's specified maximum flow- rate greater than 5 m ³ /hour [measured under standard temperature (273 K or 0 °C) and pressure (101,3kPa) conditions]; and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come in direct contact with the chemical(s) being processed are made from any of the following materials:	2B350.d

	Status: Point in time view as at 17/12/2009. s to legislation: There are currently no known outstanding effects for the
Council	egulation (EC) No 423/2007 (repealed). (See end of Document for details)
	and 20 % chromium by weight; 2. Ceramics; 3. Ferrosilicon; 4. Fluoropolymers; 5. Glass (including vitrified or enamelled coatings or glass lining); 6. Graphite or 'carbon graphite'; 7. Nickel or alloys with more than 40 % nickel by weight; 8. Tantalum or tantalum alloys; 9. Titanium or titanium alloys; 10. Zirconium or zirconium alloys; 11. Niobium (columbium) or niobium alloys; 12. Stainless steel; or 13. Aluminium alloys. <i>Technical Note:</i> The materials used for gaskets and sealis and other implementation of sealing functions do not determine the status of control of the pump.
II.A2.013	Spin-forming machines and flow-forming machines, other than those controlled by 2B009, or prohibited by I.2A.009 or I.2A.020, having a roller force of more than 60 kN and specially designed components therefor. <i>Technical Note:</i> <i>For the purpose of II.A2.013,</i> <i>machines combining the</i> <i>functions of spin-forming and</i> <i>flow-forming are regarded as</i> <i>flow-forming machines.</i>

A3.

ELECTRONICS

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
II.A3.003	 Frequency changers or generators, other than those prohibited by I.0A.002.b.13 or I.3A.004, having all of the following characteristics, and specially designed components and software therefor: a. Multiphase output capable of providing a power of 40 W or greater; b. Capable of operating in the frequency range between 600 and 2 000 Hz; and c. Frequency control better (less) than 0,1 %. Technical Note: Frequency changers in II.A3.003 are also known as converters or inverters. 	
II.A3.004	Spectrometers and diffractometers, designed for the indicative test or quantitative analysis of the elemental composition of metals or alloys without chemical decomposition of the material.	

A6.

SENSORS AND LASERS

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
II.A6.002	Optical equipment and components, other than those specified in 6A002, 6A004.b as follows:	6A002, 6A004.b

Status: Point in time view as at 17/12/2009.

	Status: Point in time view as at 17/12/2009. to legislation: There are currently no known outstand egulation (EC) No 423/2007 (repealed). (See end of De		
	Infrared optics in the wavelength range 9 000 nm – 17 000 nm and components thereof, including cadmium telluride (CdTe) components.		
П.Аб.005	Semiconductor 'lasers' and components thereof, as follows: a. Individual semiconductor 'lasers' with an output power greater than 200 mW each, in quantities larger than 100; b. Semiconductor 'laser' arrays having an output power greater than 200; b. Semiconductor 'laser' arrays having an output power greater than 200; b. Semiconductor 'laser' arrays having an output power greater than 20 W. Notes: 1. Semiconductor 'lasers' are commonly called 'laser' diodes. 2. This item does not cover 'lasers' defined in items 0B001.g.5, 0B001.h.6 and	6A005.b	
II.A6.007	 6A005.b. 3. This item does not cover 'laser' diodes with a wavelength in the range 1 200 nm - 2 000 nm. 	6A005.c.1	
	and specially designed components thereof as follows: a. Titanium-sapphire lasers, b. Alexandrite lasers. Note: This item does not cover titanium-sapphire and alexandrite lasers defined in items 0B001.g.5, 0B001.h.6 and 6A005.c.1.		

II.A6.009	Compo	nents of acousto-	6A203.b.4.c
	optics,	as follows:	
	a.	Framing tubes	
		and solid-state	
		imaging devices	
		having a recurrence	
		frequency equal to	
		or exceeding 1kHz;	
	b.	Recurrence	
		frequency supplies;	
	с.	Pockels cells.	

A7.

NAVIGATION AND AVIONICS

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
II.A7.001	Inertial navigation systems and specially designed components thereof, as follows:I.Inertial navigation systems which are certified for use on 'civil aircraft' by 	

or 'spacecraft' for attitude, guidance or control, having any of the following characteristics, and specially designed components thereof: 1. Navigation error (free inertial) subsequent to normal alignment of 0,8 nautical mile per hour (nm/)hr) 'Circular Error Probable' (CEP) or less (better); or 2. Specified to function at linear acceleration levels exceeding 10 g; Hybrid Inertial Navigation Systems

b.

> embedded with Global Navigation Satellite Systems(s) (GNSS) or with 'Data-Based Referenced Navigation? ('DBRN') System(s) for attitude, guidance or control, subsequent to normal alignment, having an INS navigation position accuracy, after loss of GNSS or 'DBRN' for a period of up to four minutes, of less (better) than 10 metres 'Circular Error Probable' (CEP); Inertial Equipment for Azimuth, Heading, or North Pointing having any of the following characteristics,

c.

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such accelerometers
are specially
designed and
developed as MWD
(Measurement
While Drilling)
sensors for use
in downhole well
services operations.

A9.

AEROSPACE AND PROPULSION

II.A9.001	Explosive bolts.	
	1	

II.B. TECHNOLOGY

No	Description	Related item from Annex I to Regulation (EC) No 428/2009
II.B.001	Technology required for the development, production or use of the items in Part II A. (Goods) above. <i>Technical Note:</i> <i>Regulation (EC) No</i> <i>423/2007, Article 1(d) the</i> <i>term 'technology' includes</i> <i>software.</i>]

[^{F1}ANNEX III

Web sites for information on the competent authorities referred to in Articles 3(4), 3(5), 4a, 5(3), 6, 8, 9, 10(1), 10(2), 11a, 11b, 13(1)and 17, and address for notifications to the European Commission

BELGIUM

http://www.diplomatie.be/eusanctions BULGARIA

http://www.mfa.government.bg CZECH REPUBLIC

http://www.mfcr.cz/mezinarodnisankce DENMARK

http://www.um.dk/da/menu/Udenrigspolitik/FredSikkerhedOgInternationalRetsorden/ Sanktioner/ GERMANY

http://www.bmwi.de/BMWi/Navigation/Aussenwirtschaft/Aussenwirtschaftsrecht/ embargos.html ESTONIA

http://www.vm.ee/est/kat_622/ IRELAND

http://foreign-affairs.net/home/index.aspx?id=28519 GREECE

http://www.ypex.gov.gr/www.mfa.gr/en-US/Policy/Multilateral+Diplomacy/International +Sanctions/ SPAIN

http://www.maec.es/es/MenuPpal/Asuntos/Sanciones%20Internacionales/Paginas/Sanciones_%20Internacionales.aspx FRANCE

http://www.diplomatie.gouv.fr/autorites-sanctions/ ITALY

http://www.esteri.it/UE/deroghe.html CYPRUS

http://www.mfa.gov.cy/sanctions LATVIA

http://www.mfa.gov.lv/en/security/4539 LITHUANIA

http://www.urm.lt LUXEMBOURG

http://www.mae.lu/sanctions HUNGARY

http://www.kulugyminiszterium.hu/kum/hu/bal/Kulpolitikank/nemzetkozi_szankciok/MALTA

 $http://www.doi.gov.mt/EN/bodies/boards/sanctions_monitoring.asp\\NETHERLANDS$

http://www.minbuza.nl/sancties AUSTRIA

http://www.bmeia.gv.at/view.php3?f_id=12750&LNG=en&version=POLAND

http://www.msz.gov.pl PORTUGAL

http://www.min-nestrangeiros.pt ROMANIA

http://www.mae.ro/index.php?unde=doc&id=32311&idlnk=1&cat=3

SLOVENIA

http://www.mzz.gov.si/si/zunanja_politika/mednarodna_varnost/omejevalni_ukrepi/SLOVAKIA

http://www.foreign.gov.sk FINLAND

http://formin.finland.fi/kvyhteistyo/pakotteet SWEDEN

http://www.ud.se/sanktioner UNITED KINGDOM

www.fco.gov.uk/competentauthorities

Address for notifications to the European Commission:

European Commission

DG External Relations

Directorate A Crisis Platform — Policy Coordination in Common Foreign and Security Policy (CFSP)

Unit A.2. Crisis Response and Peace Building

CHAR 12/106

B-1049 Bruxelles/Brussel (Belgium)

E-mail: relex-sanctions@ec.europa.eu

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Fax: (32-2) 299 08 73]

[^{F8}ANNEX IV

List of persons, entities and bodies referred to in Article 7(1)

Textual Amendments

F8 Substituted by Commission Regulation (EC) No 219/2008 of 11 March 2008 amending Council Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

A.Legal persons, entities and bodies

- (1) Abzar Boresh Kaveh Co. (*alias* BK Co.). Date of UN designation: 3.3.2008. Other information: involved in the production of centrifuge components.
- (2) Ammunition and Metallurgy Industries Group (*alias* (a) AMIG, (b) Ammunition Industries Group). Date of UN designation: 24.3.2007. Other information: (a) AMIG controls 7th of Tir, (b) AMIG is owned and controlled by the Defence Industries Organisation (DIO).

- (3) Atomic Energy Organisation of Iran (AEOI). Date of UN designation: 23.12.2006. Other information: Involved in Iran's nuclear programme.
- (4) Bank Sepah and Bank Sepah International. Date of UN designation: 24.3.2007. Other information: Bank Sepah provides support for the Aerospace Industries Organisation (AIO) and subordinates, including Shahid Hemmat Industrial Group (SHIG) and Shahid Bagheri Industrial Group (SBIG).
- (5) Barzagani Tejarat Tavanmad Saccal companies. Date of UN designation: 3.3.2008. Other information: (a) subsidiary of Saccal System companies, (b) this company tried to purchase sensitive goods for an entity listed in resolution 1737 (2006).
- (6) Cruise Missile Industry Group (*alias* Naval Defence Missile Industry Group). Date of UN designation: 24.3.2007.
- (7) Defence Industries Organisation (DIO). Date of UN designation: 23.12.2006. Other information: (a) Overarching MODAFL-controlled entity, some of whose subordinates have been involved in the centrifuge programme making components, and in the missile programme, (b) Involved in Iran's nuclear programme.
- (8) Electro Sanam Company (*alias* (a) E. S. Co., (b) E. X. Co.). Date of UN designation: 3.3.2008. Other information: AIO front-company, involved in the ballistic missile programme.
- (9) Esfahan Nuclear Fuel Research and Production Centre (NFRPC) and Esfahan Nuclear Technology Centre (ENTC). Date of UN designation: 24.3.2007. Other information: They are parts of the Atomic Energy Organisation of Iran's (AEOI) Nuclear Fuel Production and Procurement Company.
- (10) Ettehad Technical Group. Date of UN designation: 3.3.2008. Other information: AIO front-company, involved in the ballistic missile programme.
- (11) Fajr Industrial Group. Date of UN designation: 23.12.2006. Other information: (a) Formerly Instrumentation Factory Plant, (b) Subordinate entity of AIO, (c) Involved in Iran's ballistic missile programme.
- (12) Farayand Technique. Date of UN designation: 23.12.2006. Other information: (a) Involved in Iran's nuclear programme (centrifuge programme), (b) Identified in IAEA reports.
- (13) Industrial Factories of Precision (IFP) Machinery (*alias* Instrumentation Factories Plant). Date of UN designation: 3.3.2008. Other information: used by AIO for some acquisition attempts.
- (14) Jabber Ibn Hayan. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: AEOI laboratory involved in fuel-cycle activities.
- (15) Joza Industrial Co. Date of UN designation: 3.3.2008. Other information: AIO frontcompany, involved in the ballistic missile programme.
- (16) Kala-Electric (*alias* Kalaye Electric). Date of UN designation: 23.12.2006. Other information: (a) Provider for PFEP Natanz, (b) Involved in Iran's nuclear programme.
- (17) Karaj Nuclear Research Centre. Date of UN designation: 24.3.2007. Other information: Part of AEOI's research division.

- (18) Kavoshyar Company. Date of UN designation: 24.3.2007. Other information: Subsidiary company of AEOI.
- (19) Khorasan Metallurgy Industries. Date of UN designation: 3.3.2008. Other information: (a) subsidiary of the Ammunition Industries Group (AMIG) which depends on DIO, (b) involved in the production of centrifuge components.
- Mesbah Energy Company. Date of UN designation: 23.12.2006. Other information:
 (a) Provider for A40 research reactor Arak, (b) Involved in Iran's nuclear programme.
- (21) Niru Battery Manufacturing Company. Date of UN designation: 3.3.2008. Other information: (a) subsidiary of the DIO, (b) its role is to manufacture power units for the Iranian military including missile systems.
- (22) Novin Energy Company (*alias* Pars Novin). Date of UN designation: 24.3.2007. Other information: It operates within AEOI.
- (23) Parchin Chemical Industries. Date of UN designation: 24.3.2007. Other information: Branch of DIO.
- (24) Pars Aviation Services Company. Date of UN designation: 24.3.2007. Other information: maintains aircraft.
- (25) Pars Trash Company. Date of UN designation: 23.12.2006. Other information: (a) Involved in Iran's nuclear programme (centrifuge programme), (b) Identified in IAEA reports.
- (26) Pishgam (Pioneer) Energy Industries. Date of UN designation: 3.3.2008. Other information: has participated in construction of the Uranium Conversion Facility at Esfahan.
- (27) Qods Aeronautics Industries. Date of UN designation: 24.3.2007. Other information: It produces unmanned aerial vehicles (UAVs), parachutes, paragliders, paramotors, etc.
- (28) Sanam Industrial Group. Date of UN designation: 24.3.2007. Other information: subordinate to AIO.
- (29) Safety Equipment Procurement (SEP). Date of UN designation: 3.3.2008. Other information: AIO front-company, involved in the ballistic missile programme.
- (30) 7th of Tir. Date of UN designation: 23.12.2006. Other information: (a) Subordinate of DIO, widely recognised as being directly involved in Iran's nuclear programme, (b) Involved in Iran's nuclear programme.
- (31) Shahid Bagheri Industrial Group (SBIG). Date of UN designation: 23.12.2006. Other information: (a) Subordinate entity of AIO, (b) Involved in Iran's ballistic missile programme.
- (32) Shahid Hemmat Industrial Group (SHIG). Date of UN designation: 23.12.2006. Other information: (a) subordinate entity of AIO, (b) Involved in Iran's ballistic missile programme.
- (33) Sho'a' Aviation. Date of UN designation: 24.3.2007. Other information: It produces microlights.

- (34) TAMAS Company. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: (a) involved in enrichment-related activities, (b) TAMAS is an overarching body, under which four subsidiaries have been established, including one for uranium extraction to concentration and another in charge of uranium processing, enrichment and waste.
- (35) Ya Mahdi Industries Group. Date of UN designation: 24.3.2007. Other information: subordinate to AIO.
- B. Natural persons
- (1) Fereidoun **Abbasi-Davani**. Date of UN designation: 24.3.2007. Other information: Senior Ministry of Defence and Armed Forces Logistics (MODAFL) scientist with links to the Institute of Applied Physics. Working closely with Mohsen Fakhrizadeh-Mahabadi.
- (2) Dawood **Agha-Jani**. Function: Head of the PFEP Natanz. Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (3) Ali Akbar Ahmadian. Title: Vice Admiral. Function: Chief of Iranian Revolutionary Guard Corps (IRGC) Joint Staff. Date of UN designation: 24.3.2007.
- (4) Amir Moayyed Alai. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in managing the assembly and engineering of centrifuges.
- (5) Behman **Asgarpour**. Function: Operational Manager (Arak). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (6) Mohammad Fedai Ashiani. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in the production of ammonium uranyl carbonate and management of the Natanz enrichment complex.
- (7) Abbas Rezaee Ashtiani. Date of UN designation: 3.3.2008. Other information: a senior official at the AEOI Office of Exploration and Mining Affairs.
- (8) Bahmanyar Morteza **Bahmanyar**. Function: Head of Finance & Budget Dept, Aerospace Industries Organisation (AIO). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's ballistic missile programme.
- (9) Haleh **Bakhtiar**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in the production of magnesium at a concentration of 99.9 %.
- (10) Morteza **Behzad**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in making centrifuge components.
- (11) Ahmad Vahid Dastjerdi. Function: Head of the Aerospace Industries Organisation (AIO). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's ballistic missile programme.
- (12) Ahmad **Derakhshandeh**. Function: Chairman and Managing Director of Bank Sepah. Date of UN designation: 24.3.2007.
- (13) Mohammad **Eslami**. Title: Dr. Date of UN designation: 3.3.2008. Other information: Head of Defence Industries Training and Research Institute.

- (14) Reza-Gholi **Esmaeli**. Function: Head of Trade & International Affairs Dept, Aerospace Industries Organisation (AIO). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's ballistic missile programme.
- (15) Mohsen **Fakhrizadeh-Mahabadi**. Date of UN designation: 24.3.2007. Other information: Senior MODAFL scientist and former head of the Physics Research Centre (PHRC).
- (16) Mohammad **Hejazi**. Title: Brigadier General. Function: Commander of Bassij resistance force. Date of UN designation: 24.3.2007.
- (17) Mohsen **Hojati**. Function: Head of Fajr Industrial Group. Date of UN designation: 24.3.2007.
- (18) Seyyed Hussein **Hosseini**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: AEOI official involved in the heavy water research reactor project at Arak.
- (19) M. Javad Karimi Sabet. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: Head of Novin Energy Company, which is designated under resolution 1747 (2007).
- (20) Mehrdada Akhlaghi **Ketabachi**. Function: Head of Shahid Bagheri Industrial Group (SBIG). Date of UN designation: 24.3.2007.
- (21) Ali Hajinia Leilabadi. Function: Director General of Mesbah Energy Company. Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (22) Naser **Maleki**. Function: Head of Shahid Hemmat Industrial Group (SHIG). Date of UN designation: 24.3.2007. Other information: Naser Maleki is also a MODAFL official overseeing work on the Shahab-3 ballistic missile programme. The Shahab-3 is Iran's long-range ballistic missile currently in service.
- (23) Hamid-Reza **Mohajerani**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in production management at the Uranium Conversion Facility (UCF) at Esfahan.
- (24) Jafar **Mohammadi**. Function: Technical Adviser to the Atomic Energy Organisation of Iran (AEOI) (in charge of managing the production of valves for centrifuges). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (25) Ehsan **Monajemi**. Function: Construction Project Manager, Natanz. Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (26) Mohammad Reza **Naqdi**. Title: Brigadier General. Date of UN designation: 3.3.2008. Other information: former Deputy Chief of Armed Forces General Staff for Logistics and Industrial Research/Head of State Anti-Smuggling Headquarters, engaged in efforts to get round the sanctions imposed by resolutions 1737 (2006) and 1747 (2007).
- (27) Houshang **Nobari**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in the management of the Natanz enrichment complex.
- (28) Mohammad Mehdi Nejad Nouri. Title: Lt Gen. Function: Rector of Malek Ashtar University of Defence Technology. Date of UN designation: 23.12.2006. Other

information: The chemistry department of Ashtar University of Defence Technology is affiliated to MODALF and has conducted experiments on beryllium. Person involved in Iran's nuclear programme.

- (29) Mohammad **Qannadi**. Function: AEOI Vice President for Research & Development. Date of UN designation: 23.12.2006. Other information: Person involved in Iran's nuclear programme.
- (30) Amir **Rahimi**. Function: Head of Esfahan Nuclear Fuel Research and Production Center. Date of UN designation: 24.3.2007. Other information: Esfahan Nuclear Fuel Research and Production Center is part of the AEOI's Nuclear Fuel Production and Procurement Company, which is involved in enrichment-related activities.
- (31) Abbas **Rashidi**. Date of EU designation: 24.4.2007 (UN: 3.3.2008). Other information: involved in enrichment work at Natanz.
- (32) Morteza **Rezaie**. Title: Brigadier General. Function: Deputy Commander of IRGC. Date of UN designation: 24.3.2007.
- (33) Morteza **Safari**. Title: Rear Admiral. Function: Commander of IRGC Navy. Date of UN designation: 24.3.2007.
- (34) Yahya Rahim **Safavi**. Title: Maj Gen. Function: Commander, IRGC (Pasdaran). Date of UN designation: 23.12.2006. Other information: Person involved in both Iran's nuclear and ballistic missile programmes.
- (35) Seyed Jaber **Safdari**. Date of UN designation: 24.3.2007. Other information: Manager of the Natanz Enrichment Facilities.
- (36) Hosein **Salimi**. Title: General. Function: Commander of the Air Force, IRGC (Pasdaran). Date of UN designation: 23.12.2006. Other information: Person involved in Iran's ballistic missile programme.
- (37) Qasem **Soleimani**. Title: Brigadier General. Function: Commander of Qods force. Date of UN designation: 24.3.2007.
- (38) Ghasem **Soleymani**. Date of UN designation: 3.3.2008. Other information: Director of Uranium Mining Operations at the Saghand Uranium Mine.
- (39) Mohammad Reza **Zahedi**. Title: Brigadier General. Function: Commander of IRGC Ground Forces. Date of UN designation: 24.3.2007.
- (40) General **Zolqadr**. Function: Deputy Interior Minister for Security Affairs, IRGC officer. Date of UN designation: 24.3.2007.]

[^{F9}ANNEX V

List of persons, entities and bodies referred to in Article 7(2)

Textual Amendments

F9 Substituted by Council Regulation (EC) No 1100/2009 of 17 November 2009 implementing Article 7(2) of Regulation (EC) No 423/2007 concerning restrictive measures against Iran and repealing Decision 2008/475/EC.

A.Natural persons

	Name	Identifying information	Reasons	Date of listing
1.	Reza AGHAZADEH	DoB: 15/03/1949 Passport number: S4409483 valid 26/04/2000 – 27/04/2010 Issued: Tehran, Diplomatic passport number: D9001950, issued on 22/01/2008 valid until 21/01/2013, Place of birth: Khoy	Former Head of the Atomic Energy Organisation of Iran (AEOI). The AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006).	24.4.2007
2.	IRGC Brigadier- General Javad DARVISH- VAND		MODAFL Deputy for Inspection. Responsible for all MODAFL facilities and installations	24.6.2008
3.	IRGC Brigadier- General Seyyed Mahdi FARAHI		Managing Director of the Defence Industries Organisation (DIO) which is designated under UNSCR 1737 (2006)	24.6.2008
4.	Dr Hoseyn (Hossein) FAQIHIAN	Address of NFPC: AEOI- NFPD, P.O.Box: 11365-8486, Tehran / Iran	Deputy and Director-General of the Nuclear Fuel Production and Procurement Company (NFPC), part of the AEOI. The AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006). The NFPC	24.4.2007

			involved in enrichment- related activities that Iran is required by the IAEA Board and Security Council to suspend.	
5.	Engineer Mojtaba HAERI		MODAFL Deputy for Industry. Supervisory role over AIO and DIO	24.6.2008
6.	IRGC Brigadier- General Ali HOSEYNITASH		Head of the General Department of the Supreme National Security Council and involved in formulating policy on the nuclear issue	24.6.2008
7.	Mohammad Ali JAFARI, IRGC		Holds a command post at the IRGC	24.6.2008
8.	Mahmood JANNATIAN	DoB 21/04/1946, passport number: T12838903	Deputy Head of the Atomic Energy Organisation of Iran	24.6.2008
9.	Said Esmail KHALILIPOUR (a.k.a.: LANGROUDI)	DoB: 24/11/1945, PoB: Langroud	Deputy Head of AEOI. The AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006).	24.4.2007
10.	Ali Reza KHANCHI	Address of NRC: AEOI- NRC P.O.Box: 11365-8486 Tehran/ Iran; Fax: (+9821) 8021412	Head of AEOI's Tehran Nuclear Research Centre. The IAEA is continuing to seek clarification from Iran about plutonium separation experiments	24.4.2007

Status: Point in time view as at 17/12/2009.	
Changes to legislation: There are currently no known outstanding effects for the	
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)	

		carried out at the TNRC, including about the presence of HEU particles in environmental samples taken at the Karaj Waste Storage Facility where containers used to store depleted uranium targets used in those experiments are located. The AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006).	
11.	Ebrahim MAHMUDZADEH	Managing Director of Iran Electronic Industries	24.6.2008
12.	Brigadier- General Beik MOHAMMADLU	MODAFL Deputy for Supplies and Logistics	24.6.2008
13.	Anis NACCACHE	Administrator of Barzagani Tejarat Tavanmad Saccal companies; his company has attempted to procure sensitive goods for entities designated under Resolution 1737 (2006)	24.6.2008
14.	Brigadier- General Mohammad NADERI	Head of Aerospace Industries Organisation (AIO), AIO has taken part in	24.6.2008

			sensitive Iranian programmes	
15.	IRGC Brigadier- General Mostafa Mohammad NAJJAR		Minister for the Interior and former Minister of MODAFL, responsible for all military programmes, including ballistic missiles programmes.	24.6.2008
16.	Dr Javad RAHIQI (RAHIGHI)	DoB: 21/04/1954, DoB according to old Iranian calendar: 1/05/1954, PoB: Mashad	Head of the Neutron Physics Group of the AEOI. AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006).	24.4.2007
17.	Ali Akbar SALEHI		Head of the Atomic Energy Organisation of Iran (AEOI). The AEOI oversees Iran's nuclear programme and is designated under UNSCR 1737 (2006).	17.11.2009
18.	Rear Admiral Mohammad SHAFI'I RUDSARI		MODAFL Deputy for Coordination	24.6.2008
19.	IRGC Brigadier- General Ali SHAMSHIRI		MODAFL Deputy for Counter- Intelligence, responsible for security of MODAFL personnel and Installations	24.6.2008
20.	Abdollah SOLAT SANA		Managing Director of the Uranium Conversion	24.4.2007

<i>Status:</i> Point in time view as at 17/12/2009.	
Changes to legislation: There are currently no known outstanding effects for the	
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)	

21.	IRGC Brigadier- General Ahmad VAHIDI	Minister of the MODAFL and former Deputy Head of MODAFL	24.6.2008
		Facility (UCF) in Esfahan. This is the facility that produces the feed material (UF6) for the enrichment facilities at Natanz. On 27 August 2006, Solat Sana received a special award from President Ahmadinejad for his role	

B. Legal persons, entities and bodies

	Name	Identifying information	Reasons	Date of listing
1.	Aerospace Industries Organisation, AIO	AIO, 28 Shian 5, Lavizan, Tehran	AIO oversees Iran's production of missiles, including Shahid Hemmat Industrial Group, Shahid Bagheri Industrial Group and Fajr Industrial Group, which were all designated under UNSCR 1737 (2006). The head of AIO and two other senior officials were also designated under UNSCR 1737 (2006)	24.4.2007
2.	Armament Industries	Pasdaran Av., PO Box 19585/ 777, Tehran	A subsidiary of the DIO (Defence	24.4.2007

				Industries Organisation)	
3.	Armed I Geograp Organis	ohical		Assessed to provide geospatial data for the Ballistic Missile programme	24.6.2008
4.	Bank M Bank M (includin brancher subsidia	elli Iran ng all s) and	Ferdowsi Avenue, PO Box 11365-171, Tehran	Providing or attempting to provide financial support for companies	24.6.2008
	(a)	Melli Bank plc	London Wall, 11th floor, London EC2Y 5EA, United Kingdom	which are involved in or procure goods for Iran's nuclear and missile programmes	
	(b)	Bank Melli Iran Zao	Number 9/1, Ulitsa Mashkova, Moscow, 130064, Russia	(AIO, SHIG, SBIG, AEOI, Novin Energy Company, Mesbah Energy Company, Kalaye Electric Company and DIO). Bank Melli serves as a facilitator for Iran's sensitive activities. It has facilitated numerous purchases of sensitive materials for Iran's nuclear and missile programmes. It has provided a range of financial services on behalf of entities linked to Iran's nuclear and missile industries, including opening letters of credit and	

			maintaining accounts. Many of the above companies have been designated by UNSCRs 1737 (2006) and 1747 (2007). Bank Melli continues in this role, by engaging in a pattern of conduct which supports and facilitates Iran's sensitive activities. Using its banking relationships, it continues to provide support for, and financial services to, UN and EU listed entities in relation to such activities. It also acts on behalf of, and at the direction of such entities, including Bank Sepah, often operating through their subsidiaries and associates.	
5.	Defence Technology and Science Research Centre (DTSRC) – also known as the Educational Research Institute/ Moassese Amozeh Va Tahgiaghati (ERI/MAVT Co.)	Pasdaran Av., PO Box 19585/777, Tehran	Responsible for R&D. A subsidiary of the DIO. The DTSRC handles much of the procurement for the DIO	24.4.2007

6.	Iran Electronic Industries	P. O. Box 18575-365, Tehran, Iran	Wholly-owned subsidiary of MODAFL (and therefore a sister- organisation to AIO, AvIO and DIO). Its role is to manufacture electronic components for Iranian weapons systems	24.6.2008
7.	IRGC Air Force		Operates Iran's inventory of short and medium range ballistic missiles. The head of the IRGC air force was designated by UNSCR 1737 (2006)	24.6.2008
8.	Khatem- ol Anbiya Construction Organisation	Number 221, North Falamak- Zarafshan Intersection, 4th Phase, Shahkrak- E-Ghods, Tehran 14678, Iran	IRGC-owned group of companies. Uses IRGC engineering resources for construction acting as prime contractor on major projects including tunnelling, assessed to support the Iranian ballistic missile and nuclear programmes	24.6.2008
9.	Malek Ashtar University		Linked to the Ministry of Defence, set up a missiles training course in 2003, in close collaboration with the AIO	24.6.2008

10.	Marine Industries	Pasdaran Av., PO Box 19585/ 777, Tehran	A subsidiary of the DIO	24.4.2007
11.	Mechanic Industries Group		Took part in the production of components for the ballistics programme	24.6.2008
12.	Ministry of Defence and Armed Forces Logistics (MODAFL)	West side of Dabestan Street, Abbas Abad District, Tehran	Responsible for Iran's defence research, development and manufacturing programmes, including support to missile and nuclear programmes	24.6.2008
13.	Ministry of Defence Logistics Export (MODLEX)	P. O. Box 16315-189, Tehran, Iran	It is the export arm of MODAFL, and the agency used for exporting finished weapons in state-to-state transactions. Under UNSCR 1747 (2007) MODLEX should not be trading.	24.6.2008
14.	3M Mizan Machinery Manufacturing		Front company for the AIO, taking part in ballistics procurement	24.6.2008
15.	Nuclear Fuel Production and Procurement Company (NFPC)	AEOI-NFPD, P.O.Box: 11365-8486, Tehran / Iran	Nuclear Fuel Production Division (NFPD) of AEOI is research and development in the field of nuclear fuel cycle including: uranium exploration, mining, milling,	24.4.2007

<i>Status:</i> Point in time view as at 17/12/2009.					
Changes to legislation: There are currently no known outstanding effects for the					
Council Regulation (EC) No 423/2007 (repealed). (See end of Document for details)					

			conversion and nuclear waste management. The NFPC is the successor to the NFPD, the subsidiary company under the AEOI that runs research and development in the nuclear fuel cycle including conversion and enrichment	
16.	Parchin Chemical Industries		Worked on propulsion techniques for the Iranian ballistics programme	24.6.2008
17.	Special Industries Group	Pasdaran Av., PO Box 19585/777, Tehran	A subsidiary of the DIO.	24.4.2007
18.	State Purchasing Organisation (SPO)		The SPO appears to facilitate the import of whole weapons. It appears to be a subsidiary of MODAFL	24.6.2008]

[^{F2}ANNEX VI

List of credit and financial institutions referred to in Article 11a(2)

Branches and subsidiaries, where they come within the scope of Article 18, of credit and financial institutions domiciled in Iran as referred to in Article $11a(2)(b)^{(11)}$

1. BANK MELLI IRAN* France

43 Avenue Montaigne, 75008 Paris

BIC: MELIFRPP Germany

Holzbrücke 2, D-20459, Hamburg

BIC: MELIDEHH United Kingdom

Melli Bank plc

One London Wall, 11th Floor, London EC2Y 5EA

BIC: MELIGB2L

2. BANK SEPAH* France

64 rue de Miromesnil, 75008 Paris

BIC: SEPBFRPP Germany

Hafenstraße 54, D-60327 Frankfurt am Main

BIC: SEPBDEFF Italy

Via Barberini 50, 00187 Rome

BIC: SEPBITR1 United Kingdom

Bank Sepah International plc

5/7 Eastcheap, London EC3M 1JT

BIC: SEPBGB2L

3. BANK SADERAT IRAN France

Bank Saderat Iran

16 Rue de la Paix, 75002 Paris

BIC: BSIRFRPP

TELEX: 220287 SADER A / SADER B Germany

Hamburg Branch

P.O. Box 112227, Deichstraße 11, D-20459 Hamburg

BIC: BSIRDEHH

TELEX: 215175 SADBK D

Frankfurt Branch

P.O. Box 160151, Friedensstraße 4, D-60311 Frankfurt am Main

BIC: BSIRDEFF Greece

Athens Branch

PO Box 4308, 25-29 Venizelou St, GR 105 64 Athens

BIC: BSIRGRAA

TELEX: 218385 SABK GR United Kingdom

Bank Saderat plc

5 Lothbury, London EC2R 7HD

BIC: BSPLGB2L

TELEX: 883382 SADER G

4. BANK TEJARAT France

Bank Tejarat

124-126 Rue de Provence, 75008 Paris

BIC: BTEJFRPP

TELEX: 281972 F, 281973 F BKTEJ

5. PERSIA INTERNATIONAL BANK plc United Kingdom

Head Office and Main Branch

6 Lothbury, London EC2R 7HH

BIC: PIBPGB2L

TELEX: 885426

Branches and subsidiaries, where they do not come within the scope of Article 18, of credit and financial institutions domiciled in Iran and credit and financial institutions that are neither domiciled in Iran nor come within the scope of Article 18 but are controlled by persons and entities domiciled in Iran, as referred to in Article 11a(2)(c) and $(d)^{(12)}$

1. BANK MELLI* Azerbaijan

Bank Melli Iran Baku Branch

Nobel Ave. 14, Baku

BIC: MELIAZ22 Iraq

No.111-27 Alley - 929 District - Arasat Street, Baghdad

BIC: MELIIQBA Oman

Oman Muscat Branch

P.O. Box 5643, Mossa Abdul Rehman Hassan Building, 238 Al Burj St., Ruwi, Muscat, Oman $_{8\,/}$

P.O. BOX 2643 PC 112

BIC: MELIOMR China

Melli Bank HK (branch of Melli Bank PLC)

Unit 1703-04, Hong Kong Club Building, 3A Chater Road, Central Hong Kong

BIC: MELIHKHH Egypt

Representative Office

P.O. Box 2654, First Floor, Flat No 1, Al Sad el Aaly Dokhi.

Tel.: 2700605 / Fax: 92633 United Arab Emirates

Regional Office

P.O. Box: 1894, Dubai

BIC: MELIAEAD

Abu Dhabi branch

Post box No 2656 Street name: Hamdan Street

BIC: MELIAEADADH

Al Ain branch

Post box No 1888 Street name: Clock Tower, Industrial Road

BIC: MELIAEADALN

Bur Dubai branch

Post box No 3093 Street name: Khalid Bin Waleed Street

BIC: MELIAEADBR2

Dubai Main branch

Post box No 1894 Street name: Beniyas Street

BIC: MELIAEAD

Fujairah branch

Post box No 248 Street name: Al Marash R/A, Hamad Bin Abdullah Street

BIC: MELIAEADFUJ

Ras al-Khaimah branch

Post box No 5270 Street name: Oman Street, Al Nakheel

BIC: MELIAEADRAK

Sharjah branch

Post box No 459 Street name: Al Burj Street

BIC: MELIAEADSHJ Russian Federation

No 9/1 ul. Mashkova, 103064 Moscow

BIC: MELIRUMM Japan

Representative Office

333 New Tokyo Bldg, 3-1 Marunouchi, 3 Chome, Chiyoda-ku.

Tel.: 332162631. Fax (3)32162638. TELEX: J296687

2. BANK MELLAT South Korea

Bank Mellat Seoul Branch

Keumkang Tower 13/14th Floor, Tehran road 889-13, Daechi-dong Gangnam-Ku, 135 280, Seoul

BIC: BKMTKRSE

TELEX: K36019 MELLAT Turkey

Istanbul Branch

1 Binbircicek Sokak, Buyukdere Caddessi Levent -Istanbul

BIC: BKMTTRIS

TELEX: 26023 MELT TR

Ankara Branch

Ziya Gokalp Bulvari No: 12 06425 Kizilay-Ankara

BIC: BKMTTRIS100

TELEX: 46915 BMEL TR

Izmir Branch

Cumhuriyet Bulvari No: 88/A P.K 71035210 Konak-Izmir

BIC: BKMTTRIS 200

TELEX: 53053 BMIZ TR Armenia

Yerevan Branch

6 Amiryan Str. P.O. Box: 375010 P/H 24 Yerevan

BIC: BKMTAM 22

TELEX: 243303 MLTAR AM 243110 BMTRAM

3. PERSIA INTERNATIONAL BANK plc United Arab Emirates

Dubai Branch

The Gate Building, 4th Floor, P.O.BOX 119871, Dubai

BIC: PIBPAEAD

4. BANK SADERAT IRAN

Lebanon

Regional Office

Mar Elias - Mteco Center, PO BOX 5126, Beirut

BIC: BSIRLBBE

Beirut Main Branch

Verdun street – Alrose building

P.O. BOX 5126 Beirut / P.O. BOX 6717 Hamra

BIC: BSIRLBBE

TELEX: 48602 - 20738, 21205 - SADBNK

Alghobeiri Branch

No 3528, Alghobeiry BLVD, Jawhara BLDG Abdallah El Hajje str. -Ghobeiri BLVD, Alghobeiri

BIC: BSIRLBBE

Baalbak Branch

No 3418, Ras Elein str., Baalbak

BIC: BSIRLBBE

Borj al Barajneh Branch

No 4280, Al Holam BLDG, Al Kafaat cross, Al Maamoura str., Sahat Mreyjeh, 1st Floor

BIC: BSIRLBBE

Saida Branch

No 4338, Saida - Riad Elsoleh BLVD. Ali Ahmad BLG.

BIC: BSIRLBBE Oman

BLDG 606, Way 4543, 145 Complex, Ruwi High Street, Ruwi, P.O. BOX 1269, Muscat

BIC: BSIROMR

TELEX: 3146 Qatar

Doha branch

No 2623, Grand Hamad ave., P.O. BOX 2256, Doha

BIC: BSIR QA QA

TELEX: 4225 Turkmenistan

Bank Saderat Iran Ashkhabad branch

Makhtoomgholi ave., No 181, Ashkhabad

TELEX: 1161134-86278 United Arab Emirates

Regional office Dubai

Al Maktoum road, PO BOX 4182 Deira, Dubai

BIC: BSIRAEAD / BSIRAEADDLR / BSIRAEADLCD

TELEX: 45456 SADERBANK

Murshid Bazar Branch

Murshid Bazar P.O. Box 4182

Deira, Dubai

BIC: BSIRAEAD

TELEX: 45456 SADERBANK

Bur Dubai Branch

Al Fahidi Road

P.O.Box 4182 Dubai

BIC: BSIRAEAD

TELEX: 45456 SADERBANK

Ajman Branch

No 2900 Liwara street, PO BOX 16, Ajman, Dubai

BIC: BSIRAEAD

TELEX: 45456 SADERBANK

Shaykh Zayed Road Branch

Shaykh Road, Dubai

BIC: BSIRAEAD

TELEX: 45456 SADERBANK

Abu Dhabi Branch

No 2690 Hamdan street, PO BOX 2656, Abu Dhabi

BIC: BSIRAEAD

TELEX: 22263

Al Ein Branch

No 1741, Al Am Road, PO BOX 1140, Al Ein, Abu Dhabi

BIC: BSIRAEAD

TELEX: 45456 SADERBANK

Sharjah Branch

No 2776 Alaroda road, PO BOX 316, Sharjah

BIC: BSIRAEAD

TELEX: 45456 SADERBANK Bahrain

Bahrein branch

106 Government Road; P.O. Box 825, Block No 316; Entrance No 3; Manama Center; Manama

TELEX: 8363 SADER BANK

OBU

P.O. Box 825 - Manama

TELEX: 8688 SADER BANK Uzbekian

Bank Saderat Iran Tashkent

10 Tchekhov street, Mirabad district, 100060 Tashkent

BIC: BSIRUZ21

TELEX: 116134 BSITA UZ

5. TEJARAT BANK Tajikistan

No 70, Rudaki Ave., Dushanbe

P.O. Box: 734001

BIC: BTEJTJ22XXX

TELEX: 201135 BTDIR TJ China

Representative Office China

Office C208 Beijing Lufthansa Center No 50 Liangmaqiao Road Chaoyang District Beijing 100016

6. ARIAN BANK (also known as Aryan Bank) Afghanistan

Head Office

House No 2, Street No 13, Wazir Akbar Khan, Kabul

BIC: AFABAFKA

Harat branch

No 14301(2), Business Room Building, Banke Khoon road, Harat

BIC: AFABAFKA

7. FUTURE BANK

Bahrain

Future Bank

P.O. Box 785, Government Avenue 304, Manama

Shop 57, Block No 624 Shaikh Jaber Al Ahmed Al Sabah Avenue-Road No 4203, Sitra

BIC: FUBBBHBM / FUBBBHBMOBU / FUBBBHBMXXX / FUBBBHBMSIT

8. BANCO INTERNACIONAL DE DESARROLLO, SA Venezuela

Banco internacional de Desarrollo, Banco Universal

Avenida Francisco de Miranda, Torre Dosza, Piso 8, El Rosal, Chacao, Caracas

BIC: IDUNVECAXXX]

- (**1**) OJ L 61, 28.2.2007, p. 49.
- (2) OJ L 159, 30.6.2000, p. 1. Regulation as last amended by Regulation (EC) No 394/2006 (OJ L 74, 13.3.2006, p. 1).
- (**3**) [^{F3}OJ L 88, 29.3.2007, p. 58.]
- (4) [^{F4}OJ L 134, 29.5.2009, p. 1.]
- (5) OJ L 82, 22.3.1997, p. 1. Regulation as last amended by Regulation (EC) No 807/2003 (OJ L 122, 16.5.2003, p. 36).
- (6) [^{F2}OJ L 117, 4.5.2005, p. 13.
- (7) OJ L 360, 19.12.2006, p. 64.]
- (8) [^{F7}OJ L 278, 22.10.2007, p. 1.
- (9) OJ L 88, 29.3.2007, p. 58.
- (10) OJ L 61, 28.2.2007, p. 49. Common Position as last amended by Common Position 2007/246/CFSP (OJ L 106, 24.4.2007, p. 67).]
- (11) [^{F2}Entities marked * are also subject to asset freezing within the meaning of Article 5(1)(a) and (b) of Common Position 2007/140/CFSP.
- (12) See footnote 1.]

Textual Amendments

- **F2** Inserted by Council Regulation (EC) No 1110/2008 of 10 November 2008 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- **F3** Inserted by Council Regulation (EC) No 618/2007 of 5 June 2007 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- F4 Substituted by Council Regulation (EU) No 1228/2009 of 15 December 2009 amending Regulation (EC) No 423/2007 concerning restrictive measures against Iran.
- F7 Substituted by Commission Regulation (EC) No 116/2008 of 28 January 2008 amending Council Regulation (EC) No 423/2007 concerning restrictive measures against Iran.

Status:

Point in time view as at 17/12/2009.

Changes to legislation:

There are currently no known outstanding effects for the Council Regulation (EC) No 423/2007 (repealed).