ANNEX I

Minimum technical requirements for treatment in accordance with Article 6(1) and (3)

- 1. Sites for storage (including temporary storage) of end-of-life vehicles prior to their treatament:
- impermeable surfaces for appropriate areas with the provision of spillage collection facilities, decanters and cleanser-degeasers,
- equipment for the treatment of water, including rainwater, in compliance with health and environmental regulations.
- 2. Sites for treatment:
- impermeable surfaces for appropriate areas with the provision of spillage collection facilities, decanters and cleanser-degreasers,
- appropriate storage for dismantled spare parts, including impermeable storage for oilcontaminated spare parts,
- appropriate containers for storage of batteries (with electrolyte neutralisation on site or elsewhere), filters and PCB/PCT-containing condensers,
- appropriate storage tanks for the segregated storage of end-of-life vehicle fluids: fuel, motor oil, gearbox oil, transmission oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, battery acids, air-conditioning system fluids and any other fluid contained in the end-of-life vehicle,
- equipment for the treatment of water, including rainwater, in compliance with health and environmental regulations,
- appropriate storage for used tyres, including the prevention of fire hazards and excessive stockpiling.
- 3. Treatment operations for depollution of end-of-life vehicles:
- removal of batteries and liquified gas tanks,
- removal or neutralisation of potential explosive components, (e.g. air bags),
- removal and separate collection and storage of fuel, motor oil, transmission oil, gearbox oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, air-conditioning system fluids and any other fluid contained in the end-of-life vehicle, unless they are necessary for the re-use of the parts concerned,
- removal, as far as feasible, of all components identified as containing mercury.
- 4. Treatment operations in order to promote recycling:
- removal or catalysts,
- removal of metal components containing copper, aluminium and magnesium if these metals are not segregated in the shredding process,
- removal of tyres and large plastic components (bumpers, dashboard, fluid containers, etc), if these materials are not segregated in the shredding process in such a way that they can be effectively recycled as materials,
- removal of glass.
- 5. Storage operations are to be carried out avoiding damage to components containing fluids or to recoverable components and spare parts.

[^{F1}ANNEX II

Materials and components exempt from Article 4(2)(a)

Textual Amendments

F1 Substituted by Commission Directive (EU) 2016/774 of 18 May 2016 amending Annex II to Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles (Text with EEA relevance).

Materials and components		Scope and expiry date of the exemption	To be labelled or made identifiable in accordance with Article 4(2)(b)(iv)
Le	ad as an alloying element	1	
1(a)	5. Steel for machining purposes and batch hot dip galvanised steel components containing up to 0,35 % lead by weight		
1(b)	Continuously galvanised steel sheet containing up to 0,35 % lead by weight	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	
2(a)	Aluminium for machining purposes with a lead content up to 2 % by weight	As spare parts for vehicles put on the market before 1 July 2005	
2(b)	Aluminium with a lead content up to 1,5 % by weight	As spare parts for vehicles put on the market before 1 July 2008	
2(c)	Aluminium with a lead content up to 0,4 % by weight	a	
a	This exemption shall be reviewed in 2015.		
b	This exemption shall be reviewed in 2019.		
c	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		
d	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For application of this clause electronic devices not installed by the manufacturer on the production line shall not be take into account.		

3.	Copper alloy containing up to 4 % lead by weight	a	
4(a).	Bearing shells and bushes	As spare parts for vehicles put on the market before 1 July 2008	
4(b).	Bearing shells and bushes in engines, transmissions and air conditioning compressors	As spare parts for vehicles put on the market before 1 July 2011	
Lea	d and lead compounds in	components	
5.	Batteries	a	X
6.	Vibration dampers	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X
7(a).	Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings	As spare parts for vehicles put on the market before 1 July 2005	
7(b).	Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings	As spare parts for vehicles put on the market before 1 July 2006	
a T	his exemption shall be reviewed in	2015.	
b T	his exemption shall be reviewed in	2019.	
a	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		
a	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

	containing up to 0,5 % lead by weight		
7(c)	 Bonding agents for elastomers in powertrain applications containing up to 0,5 % lead by weight 	As spare parts for vehicles put on the market before 1 July 2009	
8(a)	 Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards 	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X ^c
8(b)	Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass	Vehicles type-approved before 1 January 2011 and spare parts for these vehicles	X°
8(c)	Lead in finishes on terminals of electrolyte aluminium capacitors	Vehicles type-approved before 1 January 2013 and spare parts for these vehicles	Xe
8(d)	Lead used in soldering on glass in mass airflow sensors	Vehicles type-approved before 1 January 2015 and spare parts of such vehicles	X°
a	This exemption shall be reviewed in 2015.		
b	This exemption shall be reviewed in 2019.		
c	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the pplication of this clause electronic devices not installed by the manufacturer on the production line shall not be taken nto account.		
d	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

8(e).	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	b	X°
8(f)(a).	Lead in compliant pin connector systems	Vehicles type-approved before 1 January 2017 and spare parts for these vehicles	X ^e
8(f)(b).	Lead in compliant pin connector systems other than the mating area of vehicle harness connectors	b	X°
8(g).	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	b	Xe
8(h).	Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1 cm ² of projection area and a nominal current density of at least 1 A/mm ² of silicon chip area	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X°
a This e	This exemption shall be reviewed in 2015.		
b This e	This exemption shall be reviewed in 2019.		
applic	c Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

d Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.

8(i).	Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	X°
8(j).	Lead in solders for soldering of laminated glazing	Vehicles type-approved before 1 January 2020 and spare parts for these vehicles	X°
9.	Valve seats	As spare parts for engine types developed before 1 July 2003	
	 Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic material, or in a glass-ceramic matrix compound. exemption does not er the use of lead in: glass in bulbs and glaze of spark plugs, dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d). 		X ^d (for components other than piezo in engines)
10(ł	b). Lead in PZT- based dielectric ceramic materials of capacitors being part of integrated		
a	This exemption shall be reviewed in	2015.	
b	This exemption shall be reviewed in 2019.		
	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		
	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

	circuits or discrete semiconductors		
10(0	c). Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC	Vehicles type-approved before 1 January 2016 and spare parts for these vehicles	
10(d). Lead in the dielectric ceramic materials of capacitors compensating the temperature- related deviations of sensors in ultrasonic sonar systems	Vehicles type-approved before 1 January 2017 and spare parts for these vehicles	
11.	Pyrotechnic initiators	Vehicles type-approved before 1 July 2006 and spare parts for these vehicles	
12.	Lead-containing thermoelectric materials in automotive electrical applications to reduce CO_2 emissions by recuperation of exhaust heat	Vehicles type-approved before 1 January 2019 and spare parts for these vehicles	X
He	xavalent chromium		
13(a	a). Corrosion preventive coatings	As spare parts for vehicles put on the market before 1 July 2007	
13(1	b). Corrosion preventive coatings related to bolt and	As spare parts for vehicles put on the market before 1 July 2008	
a	This exemption shall be reviewed in	2015.	·
b	This exemption shall be reviewed in 2019.		
c	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		
d	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

	nut assemblies for chassis applications		
14.	As an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators in motor caravans up to 0,75 weight -% in the cooling solution except where the use of other cooling technologies is practicable (i.e. available on the market for the application in motor caravans) and does not lead to negative environmental, health and/or consumer safety impacts		X
M	ercury	<u>`</u>	
15((a). Discharge lamps for headlight application	Vehicles type-approved before 1 July 2012 and spare parts for these vehicles	X
15((b). Fluorescent tubes used in instrument panel displays	Vehicles type-approved before 1 July 2012 and spare parts for these vehicles	X
Ca	udmium		
16.	Batteries for electrical vehicles	As spare parts for vehicles put on the market before 31 December 2008	
a	This exemption shall be reviewed in	2015.	
b	This exemption shall be reviewed in	2019.	
c	Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		
d	Dismantling if, in correlation with entries 8(a) to 8(j), an average threshold of 60 grams per vehicle is exceeded. For the application of this clause electronic devices not installed by the manufacturer on the production line shall not be taken into account.		

Notes:

A maximum concentration value up to 0,1 % by weight and in homogeneous material, for lead, hexavalent chromium and mercury and up to 0,01 % by weight in homogeneous material for cadmium shall be tolerated.

The reuse of parts of vehicles which were already on the market at the date of expiry of an exemption shall be allowed without limitation since it is not covered by Article 4(2)(a).

Spare parts put on the market after 1 July 2003 which are used for vehicles put on the market before 1 July 2003 shall be exempted from the provisions of Article $4(2)(a)^{(1)}$.]

(1) [^{F1}This clause shall not apply to wheel balance weights, carbon brushes for electric motors and brake linings.]

Textual Amendments

F1 Substituted by Commission Directive (EU) 2016/774 of 18 May 2016 amending Annex II to Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles (Text with EEA relevance).