Changes to legislation: There are currently no known outstanding effects for the Regulation (EC) No 1907/2006 of the European Parliament and of the Council, ANNEX XVII Table 3: rows 301 - 350. (See end of Document for details)

# [X1ANNEX XVII

# [FIRESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES]

#### **Editorial Information**

X1 Substituted by Corrigendum to Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Official Journal of the European Union L 396 of 30 December 2006).

#### **Textual Amendments**

**F1** Substituted by Commission Regulation (EC) No 552/2009 of 22 June 2009 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII (Text with EEA relevance).

Changes to legislation: There are currently no known outstanding effects for the Regulation (EC) No 1907/2006 of the European Parliament and of the Council, ANNEX XVII Table 3: rows 301 - 350. (See end of Document for details)

# Appendix 2

[F1Entry 28 — Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)]

# ANNEX XVII Table 3: rows 301 - 350

ANNEA AVII Iau	1C 3. 10WS 301 - 33	U		
Hydrocarbon oils, arom., mixed with polyethylene, pyrolysed, light oil fraction; Heat treatment products (The oil obtained from the heat treatment of polyethylene with coal tar pitch or aromatic oils. It consists predominantly of benzene and its homologs boiling in a range of 70 to 120 °C.)	648-135-00-X	309-748-5	100801-65-8	J, M
Hydrocarbon oils, arom., mixed with polystyrene, pyrolysed, light oil fraction; Heat treatment products (The oil obtained from the heat treatment of polystyrene with coal tar pitch or aromatic oils. It consists predominantly of benzene and its homologs boiling in a range of approximately 70 to 210 °C.)	648-136-00-5	309-749-0	100801-66-9	J, M
Extract residues (coal), tar oil alkaline,	648-137-00-0	277-567-8	736665-18-6	J, M

naphthalene distillation residues; Naphthalene oil extract residue (The residue obtained from chemical oil extracted after the removal of naphthalene by distillation composed primarily of two to four membered condensed ring aromatic hydrocarbons and aromatic nitrogen bases.)				
[FICreosote oil, low-boiling distillate; Wash Oil; [The low-boiling distillation fraction obtained from the high temperature carbonization of bituminous coal, which is further refined to remove excess crystalline salts. It consists primarily of creosote oil with some of the normal polynuclear aromatic salts, which are components of coal tar distillate, removed. It is crystal free at approximately 38 °C (100 °F).]	648-138-00-6	274-566-4	70321-80-1	M]
Tar acids, cresylic, sodium	648-139-00-1	272-361-4	68815-21-4	J, M

salts, caustic solutions.; Alkaline extract				
Extract oils (coal), tar base; Acid extract (The extract from coal tar oil alkaline extract residue produced by an acidic wash such as aqueous sulfuric acid after distillation to remove naphthalene. Composed primarily of the acid salts of various aromatic nitrogen bases including pyridine, quinoline, and their alkyl derivatives.)	648-140-00-7	266-020-9	65996-86-3	J, M
Tar bases, coal, crude; Crude tar bases (The reaction product obtained by neutralising coal tar base extract oil with an alkaline solution, such as aqueous sodium hydroxide, to obtain the free bases. Composed primarily of such organic bases as acridine, phenanthridine, pyridine, quinoline and their alkyl derivatives.)	648-141-00-2	266-018-8	65996-84-1	J, M

Residues (coal), liquid solvent extraction; (A cohesive powder composed of coal mineral matter and undissolved coal remaining after extraction of coal by a liquid solvent.)	648-142-00-8	302-681-2	94114-46-2	M
Coal liquids, liquid solvent extraction solution.; (The product obtained by filtration of coal mineral matter and undissolved coal from coal extract solution produced by digesting coal in a liquid solvent. A black, viscous, highly complex liquid combination composed primarily of aromatic and partly hydrogenated aromatic hydrocarbons, aromatic nitrogen compounds, aromatic sulfur compounds, phenolic and other aromatic oxygen compounds and their alkyl derivatives.)	648-143-00-3	302-682-8	94114-47-3	M

Coal liquids, liquid solvent extraction; (The substantially solvent-free product obtained by the distillation of the solvent from filtered coal extract solution produced by digesting coal in a liquid solvent. A black semisolid, composed primarily of a complex combination of condensed-ring aromatic hydrocarbons, aromatic nitrogen compounds, aromatic sulfur compounds and other aromatic oxygen compounds, and their alkyl derivatives.)	648-144-00-9	302-683-3	94114-48-4	M
Light oil (coal), coke-oven; Crude benzole (The volatile organic liquid extracted from the gas evolved in the high temperature (greater than 700 °C) destructive distillation of coal. Composed primarily of benzene, toluene, and xylenes.	648-147-00-5	266-012-5	65996-78-3	J

May contain other minor hydrocarbon constituents.)				
Distillates (coal), liquid solvent extraction, primary; (The liquid product of condensation of vapours emitted during the digestion of coal in a liquid solvent and boiling in the range of approximately 30 to 300 °C. Composed primarily of partly hydrogenated condensed-ring aromatic hydrocarbons, aromatic compounds containing nitrogen, oxygen and sulfur, and their alkyl derivatives having carbon numbers predominantly in the range of C4 through C14.)	648-148-00-0	302-688-0	94114-52-0	J
Distillates (coal), solvent extraction, hydrocracked; (Distillate obtained by hydrocracking of coal extract or solution produced by the liquid solvent extraction or supercritical	648-149-00-6	302-689-6	94114-53-1	J

gas extraction process and boiling in the range of approximately 30 to 300 °C. Composed primarily of aromatic, hydrogenated aromatic and naphthenic compounds, their alkyl derivatives and alkanes with carbon numbers predominantly in the range of C <sub>4</sub> through C <sub>14</sub> . Nitrogen, sulfur and oxygencontaining aromatic and hydrogenated aromatic compounds are also present.)				
Naphtha (coal), solvent extraction, hydrocracked; (Fraction of the distillate obtained by hydrocracking of coal extract or solution produced by the liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 30 to 180 °C. Composed primarily of aromatic, hydrogenated aromatic and	648-150-00-1	302-690-1	94114-54-2	J

naphthenic compounds, their alkyl derivatives and alkanes with carbon numbers predominantly in the range of C <sub>4</sub> to C <sub>9</sub> . Nitrogen, sulfur and oxygencontaining aromatic and hydrogenated aromatic compounds are also present.)				
Gasoline, coal solvent extraction, hydrocracked naphtha; (Motor fuel produced by the reforming of the refined naphtha fraction of the products of hydrocracking of coal extract or solution produced by the liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 30 to 180 °C. Composed primarily of aromatic and naphthenic hydrocarbons, their alkyl derivatives and alkyl hydrocarbons having carbon numbers in the	648-151-00-7	302-691-7	94114-55-3	J

range of C <sub>4</sub> through C <sub>9</sub> .)				
Distillates (coal), solvent extraction, hydrocracked middle; (Distillate obtained from the hydrocracking of coal extract or solution produced by the liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 180 to 300 °C. Composed primarily of tworing aromatic, hydrogenated aromatic and naphthenic compounds, their alkyl derivatives and alkanes having carbon numbers predominantly in the range of C9 through C14. Nitrogen, sulfur and oxygencontaining compounds are also present.)	648-153-00-2	302-693-8	94114-56-4	J
(coal), solvent extraction, hydrocracked hydrogenated middle; (Distillate from the hydrogenation				

of hydrocracked middle distillate from coal extract or solution produced by the liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 180 to 280 °C. Composed primarily of hydrogenated two-ring carbon compounds and their alkyl derivatives having carbon numbers predominantly in the range of C9 through C14.)				
Light oil (coal), semi-coking process; Fresh oil (The volatile organic liquid condensed from the gas evolved in the low temperature (less than 700 °C) destructive distillation of coal. Composed primarily of C <sub>6-10</sub> hydrocarbons.)	648-156-00-4	292-635-7	90641-11-5	J
Extracts (petroleum), light naphthenic distillate solvent	649-001-00-3	265-102-1	64742-03-6	[F2H]
Extracts (petroleum), heavy paraffinic distillate solvent	649-002-00-9	265-103-7	64742-04-7	[F2H]

Extracts (petroleum), light paraffinic distillate solvent	649-003-00-4	265-104-2	6472-05-8	[F2H]
Extracts (petroleum), heavy naphthenic distillate solvent	649-004-00-X	265-111-0	64742-11-6	[ <sup>F2</sup> H]
Extracts (petroleum), light vacuum gas oil solvent	649-005-00-5	295-341-7	91995-78-7	[F2H]
Hydrocarbons C <sub>26-55</sub> , aromrich	649-006-00-0	307-753-7	97722-04-8	[ <sup>F2</sup> H]
Residues (petroleum), atm. tower; Heavy fuel oil (A complex residuum from the atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly greater than C <sub>20</sub> and boiling above approximately 350 °C. This stream is likely to contain 5 wt % or more of four- to six-membered condensed ring aromatic hydrocarbons.)	649-008-00-1	265-045-2	64741-45-3	
Gas oils (petroleum), heavy vacuum; Heavy fuel oil (A complex combination of hydrocarbons	649-009-00-7	265-058-3	64741-57-7	

produced by the vacuum distillation of the residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>20</sub> through C <sub>50</sub> and boiling in the range of approximately 350 to 600 °C. This stream is likely to contain 5 wt % more of four- to sixmembered condensed ring aromatic hydrocarbons.)				
Distillates (petroleum), heavy catalytic cracked; Heavy fuel oil (A complex combination of hydrocarbons produced by the distillation of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>15</sub> through C <sub>35</sub> and boiling in the range of approximately 260 to 500 °C. This stream is likely to contain	649-010-00-2	265-063-0	64741-61-3	

5 wt % or more of four- to six- membered condensed ring aromatic hydrocarbons.)				
Clarified oils (petroleum), catalytic cracked; Heavy fuel oil (A complex combination of hydrocarbons produced as the residual fraction from distillation of the products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly greater than C <sub>20</sub> and boiling above approximately 350 °C. This stream is likely to contain 5 wt % or more of four- to six-membered condensed ring aromatic hydrocarbons.)	649-011-00-8	265-064-6	64741-62-4	
Residues (petroleum), hydrocracked; Heavy fuel oil (A complex combination of hydrocarbons produced as the residual fraction from distillation of the products of a hydrocracking process. It	649-012-00-3	265-076-1	64741-75-9	

consists of hydrocarbons having carbon numbers predominantly greater than $C_{20}$ and boiling above approximately 350 °C.)				
Residues (petroleum), thermal cracked; Heavy fuel oil (A complex combination of hydrocarbons produced as the residual fraction from distillation of the product from a thermal cracking process. It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly greater than C <sub>20</sub> and boiling above approximately 350 °C. This stream is likely to contain 5 wt % or more of 4-to 6-membered condensed ring aromatic hydrocarbons.)	649-013-00-9	265-081-9	64741-80-6	
Distillates (petroleum), heavy thermal cracked; Heavy fuel oil (A complex combination of hydrocarbons from the distillation of	649-014-00-4	265-082-4	64741-81-7	

the products from a thermal cracking process. It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly in the range of C <sub>15</sub> through C <sub>36</sub> and boiling in the range of approximately 260 to 480 °C. This stream is likely to contain 5 wt % or more or four- to sixmembered condensed ring aromatic hydrocarbons.)				
Gas oils (petroleum), hydrotreated vacuum; Heavy fuel oil (A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>13</sub> through C <sub>50</sub> and boiling in the range of approximately 230 to 600 °C. This stream is likely to contain	649-015-00-X	265-162-9	64742-59-2	

5 wt % or more				
of four- to six-				
membered				
condensed				
ring aromatic				
hydrocarbons.)				
	- 10 01 - 00 <del>-</del>			
Residues	649-016-00-5	265-181-2	64742-78-5	
(petroleum)				
hydrodesulphurise	d			
atmospheric				
tower; Heavy				
fuel oil				
(A complex				
combination of				
hydrocarbons				
obtained by				
treating an				
atmospheric				
tower residuum				
with hydrogen				
in the presence				
of a catalyst				
under conditions				
primarily				
to remove				
organic sulfur				
compounds.				
It consists of				
hydrocarbons				
having carbon				
numbers				
predominantly				
greater than				
$C_{20}$ and				
boiling above				
approximately				
350 °C. This				
stream is likely				
to contain 5 wt				
% or more of				
four- to six-				
membered				
condensed				
ring aromatic				
hydrocarbons.)				
Gas oils	649-017-00-0	265-189-6	64742-86-5	
(petroleum),	017 017 00 0	200 100 0	01712 00 3	
hydrodesulphurise	d			
heavy vacuum;	4			
Heavy fuel oil				
(A complex				
combination of				
Comomunion of	I	I	I	I

hydrocarbons obtained from a catalytic hydrodesulphurisa process. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>20</sub> through C <sub>50</sub> and boiling in the range of approximately 350 to 600 °C. This stream is likely to contain 5 wt % or more of four- to sixmembered condensed ring aromatic hydrocarbons.)	tion			
Residues (petroleum), steam-cracked; Heavy fuel oil (A complex combination of hydrocarbons obtained as the residual fraction from the distillation of the products of a steam cracking process (including steam cracking to produce ethylene). It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly greater than C <sub>14</sub> and boiling above	649-018-00-6	265-193-8	64742-90-1	

approximately 260 °C. This stream is likely to contain 5 wt % or more of four- to six-membered condensed ring aromatic hydrocarbons.)				
Residues (petroleum), atmospheric; Heavy fuel oil (A complex residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly greater than C <sub>11</sub> and boiling above approximately 200 °C. This stream is likely to contain 5 wt % or more of four- to sixmembered condensed ring aromatic hydrocarbons.)	649-019-00-1	269-777-3	68333-22-2	
Clarified oils (petroleum), hydrodesulphurise catalytic cracked; Heavy fuel oil (A complex combination of hydrocarbons obtained by treating catalytic cracked clarified oil with hydrogen to convert	649-020-00-7	269-782-0	68333-26-6	

organic sulfur to hydrogen sulfide which is removed. It consists of hydrocarbons having carbon numbers predominantly greater than C <sub>20</sub> and boiling above approximately 350 °C. This stream is likely to contain 5 wt % or more of four- to sixmembered condensed ring aromatic hydrocarbons.)				
Distillates (petroleum), hydrodesulphurise intermediate catalytic cracked; Heavy fuel oil (A complex combination of hydrocarbons obtained by treating intermediate catalytic cracked distillates with hydrogen to convert organic sulfur to hydrogen sulfide which is removed. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>11</sub> through C <sub>30</sub> and boiling in the range of	649-021-00-2 ed	269-783-6	68333-27-7	

approximately 205 to 450 °C. It contains a relatively large proportion of tricyclic aromatic hydrocarbons.)				
Distillates (petroleum), hydrodesulphurise heavy catalytic cracked; Heavy fuel oil (A complex combination of hydrocarbons obtained by treatment of heavy catalytic cracked distillates with hydrogen to convert organic sulfur to hydrogen sulfide which is removed. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>15</sub> through C <sub>35</sub> and boiling in the range of approximately 260 to 500 °C. This stream is likely to contain 5 wt % or more of four- to six-membered condensed	649-022-00-8 ed	269-784-1	68333-28-8	
ring aromatic hydrocarbons.)				
Fuel oil, residues-straight- run gas oils,	649-023-00-3	270-674-0	68476-32-4	

high-sulfur; Heavy fuel oil				
Fuel oil, residual; Heavy fuel oil (The liquid product from various refinery streams, usually residues. The composition is complex and varies with the source of the crude oil.)	649-024-00-9	270-675-6	68476-33-5	
Residues (petroleum), catalytic reformer fractionator residue distillation; Heavy fuel oil (A complex residuum from the distillation of catalytic reformer fractionator residue. It boils above approximately 399 °C.)	649-025-00-4	270-792-2	68478-13-7	
Residues (petroleum), heavy coker gas oil and vacuum gas oil; Heavy fuel oil (A complex combination of hydrocarbons produced as the residual fraction from the distillation of heavy coker gas oil and vacuum gas oil. It predominantly consists of	649-026-00-X	270-796-4	68478-17-1	

hydrocarbons having carbon numbers predominantly greater than C <sub>13</sub> and boiling above approximately 230 °C.)				
Residues (petroleum), heavy coker and light vacuum; Heavy fuel oil (A complex combination of hydrocarbons produced as the residual fraction from the distillation of heavy coker gas oil and light vacuum gas oil. It consists predominantly of hydrocarbons having carbon numbers predominantly greater than C <sub>13</sub> and boiling above approximately 230 °C.)	649-027-00-5	270-983-0	68512-61-8	
Residues (petroleum), light vacuum; Heavy fuel oil (A complex residuum from the vacuum distillation of the residuum from the atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly	649-028-00-0	270-984-6	68512-62-9	

greater than C <sub>13</sub> and boiling above approximately 230 °C.)				
Residues (petroleum), steam-cracked light; Heavy fuel oil (A complex residuum from the distillation of the products from a steam-cracking process. It consists predominantly of aromatic and unsaturated hydrocarbons having carbon numbers greater than C <sub>7</sub> and boiling in the range of approximately 101 to 555 °C.)	649-029-00-6	271-013-9	68513-69-9	
Fuel oil, No 6; Heavy fuel oil (A distillate oil having a minimum viscosity of 197 10 <sup>-6</sup> m <sup>2</sup> s <sup>-1</sup> at 37,7 °C to a maximum of 197 10 <sup>-5</sup> m <sup>2</sup> s <sup>-1</sup> at 37,7 °C.)	649-030-00-1	271-384-7	68553-00-4	
Residues (petroleum), topping plant, low-sulfur; Heavy fuel oil (A low-sulfur complex combination of hydrocarbons produced as the residual fraction from the topping	649-031-00-7	271-763-7	68607-30-7	

plant distillation of crude oil. It is the residuum after the straight- run gasoline cut, kerosene cut and gas oil cut have been removed.)				
Gas oils (petroleum), heavy atmospheric; Heavy fuel oil (A complex combination of hydrocarbons obtained by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C <sub>7</sub> through C <sub>35</sub> and boiling in the range of approximately 121 to 510 °C.)	649-032-00-2	272-184-2	68783-08-4	
Residues (petroleum), coker scrubber, Condensed-ring- aromcontg.; Heavy fuel oil (A very complex combination of hydrocarbons produced as the residual fraction from the distillation of vacuum residuum and the products from a thermal cracking process. It consists predominantly of hydrocarbons having carbon	649-033-00-8	272-187-9	68783-13-1	

C <sub>20</sub> and boiling above approximately 350 °C. This stream is likely to contain 5 wt % or more of four- to six-membered condensed ring aromatic hydrocarbons.)
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#### **Status:**

Point in time view as at 31/01/2018.

### **Changes to legislation:**

There are currently no known outstanding effects for the Regulation (EC) No 1907/2006 of the European Parliament and of the Council, ANNEX XVII Table 3: rows 301 - 350.