

Status: Point in time view as at 31/01/2018.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 4: rows 101 - 150. (See end of Document for details)

[^{X1}ANNEX XVII

[^{F1}RESTRICTIONS 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 \(Text with EEA relevance\).](#)

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Appendix 4

[^{F1}Entry 29 — Mutagens: category 1B (Table 3.1)/category 2 (Table 3.2)]

ANNEX XVII Table 4: rows 101 - 150

[^{F1} Phenols, ammonia liquor ext.; Alkaline Extract; [The combination of phenols extracted, using isobutyl acetate, from the ammonia liquor condensed from the gas evolved in low-temperature (less than 700 °C (1 292 °F)) destructive distillation of coal. It consists predominantly of a mixture of monohydric and dihydric phenols.]	648-111-00-9	284-881-9	84988-93-2	J, M
Distillates (coal tar), light oils, alk. exts.; Alkaline Extract; [The aqueous extract from carbolic oil produced by an alkaline wash such as aqueous sodium hydroxide. Composed primarily of the alkali salts of various phenolic compounds.]	648-112-00-4	292-610-0	90640-88-3	J, M
Extracts, coal tar oil alk.; Alkaline Extract;	648-113-00-X	266-017-2	65996-83-0	J, M

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[The extract from coal tar oil produced by an alkaline wash such as aqueous sodium hydroxide. Composed primarily of the alkali salts of various phenolic compounds.]				
Distillates (coal tar), naphthalene oils, alk. exts.; Alkaline Extract; [The aqueous extract from naphthalene oil produced by an alkaline wash such as aqueous sodium hydroxide. Composed primarily of the alkali salts of various phenolic compounds.]	648-114-00-5	292-611-6	90640-89-4	J, M
Extract residues (coal), tar oil alk., carbonated, limed; Crude Phenols; [The product obtained by treatment of coal tar oil alkaline extract with CO ₂ and CaO. Composed primarily of CaCO ₃ , Ca(OH) ₂ , Na ₂ CO ₃ and other organic and inorganic impurities.]	648-115-00-0	292-629-4	90641-06-8	J, M
Tar acids, coal, crude; Crude Phenols;	648-116-00-6	266-019-3	65996-85-2	J, M

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[The reaction product obtained by neutralizing coal tar oil alkaline extract with an acidic solution, such as aqueous sulfuric acid, or gaseous carbon dioxide, to obtain the free acids. Composed primarily of tar acids such as phenol, cresols, and xylenols.]				
Tar acids, brown-coal, crude; Crude Phenols; [An acidified alkaline extract of brown coal tar distillate. Composed primarily of phenol and phenol homologs.]	648-117-00-1	309-888-7	101316-86-3	J, M
Tar acids, brown-coal gasification; Crude Phenols; [A complex combination of organic compounds obtained from brown coal gasification. Composed primarily of C ₆₋₁₀ hydroxy aromatic phenols and their homologs.]	648-118-00-7	295-536-7	92062-22-1	J, M
Tar acids, distn. residues; Distillate Phenols;	648-119-00-2	306-251-5	96690-55-0	J, M

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<p>[A residue from the distillation of crude phenol from coal. It consists predominantly of phenols having carbon numbers in the range of C₈ through C₁₀ with a softening point of 60 °C to 80 °C (140 °F to 176 °F).]</p>				
<p>Tar acids, methylphenol fraction; Distillate Phenols; [The fraction of tar acid rich in 3- and 4-methylphenol, recovered by distillation of low-temperature coal tar crude tar acids.]</p>	648-120-00-8	284-892-9	84989-04-8	J, M
<p>Tar acids, polyalkylphenol fraction; Distillate Phenols; [The fraction of tar acids, recovered by distillation of low-temperature coal tar crude tar acids, having an approximate boiling range of 225 °C to 320 °C (437 °F to 608 °F). Composed primarily of polyalkylphenols.]</p>	648-121-00-3	284-893-4	84989-05-9	J, M
<p>Tar acids, xylenol fraction; Distillate Phenols;</p>	648-122-00-9	284-895-5	84989-06-0	J, M

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[The fraction of tar acids, rich in 2,4- and 2,5-dimethylphenol, recovered by distillation of low-temperature coal tar crude tar acids.]				
Tar acids, ethylphenol fraction; Distillate Phenols; [The fraction of tar acids, rich in 3- and 4-ethylphenol, recovered by distillation of low-temperature coal tar crude tar acids.]	648-123-00-4	284-891-3	84989-03-7	J, M
Tar acids, 3,5-xylenol fraction; Distillate Phenols; [The fraction of tar acids, rich in 3,5-dimethylphenol, recovered by distillation of low-temperature coal tar acids.]	648-124-00-X	284-896-0	84989-07-1	J, M
Tar acids, residues, distillates, first-cut; Distillate Phenols; [The residue from the distillation in the range of 235 °C to 355 °C (481 °F to 697 °F) of light carbolic oil.]	648-125-00-5	270-713-1	68477-23-6	J, M

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Tar acids, cresylic, residues; Distillate Phenols; [The residue from crude coal tar acids after removal of phenol, cresols, xylenols and any higher boiling phenols. A black solid with a melting point approximately 80 °C (176 °F). Composed primarily of polyalkylphenols, resin gums, and inorganic salts.]	648-126-00-0	271-418-0	68555-24-8	J, M
Phenols, C ₉₋₁₁ ; Distillate Phenols	648-127-00-6	293-435-2	91079-47-9	J, M
Tar acids, cresylic; Distillate Phenols; [A complex combination of organic compounds obtained from brown coal and boiling in the range of approximately 200 °C to 230 °C (392 °F to 446 °F). It contains chiefly phenols and pyridine bases.]	648-128-00-1	295-540-9	92062-26-5	J, M
Tar acids, brown-coal, C ₂ -alkylphenol fraction; Distillate Phenols;	648-129-00-7	302-662-9	94114-29-1	J, M

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[The distillate from the acidification of alkaline washed lignite tar distillate boiling in the range of approximately 200 °C to 230 °C (392 °F to 446 °F). Composed primarily of m- and p-ethylphenol as well as cresols and xylenols.]				
Extract oils (coal), naphthalene oils; Acid Extract; [The aqueous extract produced by an acidic wash of alkali-washed naphthalene oil. Composed primarily of acid salts of various aromatic nitrogen bases including pyridine, quinoline and their alkyl derivatives.]	648-130-00-2	292-623-1	90641-00-2	J, M
Tar bases, quinoline derivs.; Distillate Bases	648-131-00-8	271-020-7	68513-87-1	J, M
Tar bases, coal, quinoline derivs. fraction; Distillate Bases	648-132-00-3	274-560-1	70321-67-4	J, M
Tar bases, coal, distn. residues; Distillate Bases; [The distillation residue remaining after the distillation of	648-133-00-9	295-544-0	92062-29-8	J, M

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<p>the neutralized, acid-extracted base-containing tar fractions obtained by the distillation of coal tars. It contains chiefly aniline, collidines, quinoline and quinoline derivatives and toluidines.]</p>				
<p>Hydrocarbon oils, arom., mixed with polyethylene and polypropylene, pyrolyzed, light oil fraction; Heat Treatment Products; [The oil obtained from the heat treatment of a polyethylene/polypropylene mixture with coal tar pitch or aromatic oils. It consists predominantly of benzene and its homologs boiling in a range of approximately 70 °C to 120 °C (158 °F to 248 °F).]</p>	648-134-00-4	309-745-9	100801-63-6	J, M
<p>Hydrocarbon oils, arom., mixed with polyethylene, pyrolyzed, light oil fraction; Heat Treatment Products; [The oil obtained from the heat treatment of</p>	648-135-00-X	309-748-5	100801-65-8	J, M

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polyethylene with coal tar pitch or aromatic oils. It consists predominantly of benzene and its homologs boiling in a range of 70 °C to 120 °C (158 °F to 248 °F).]				
Hydrocarbon oils, arom., mixed with polystyrene, pyrolyzed, 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 °C to 210 °C (158 °F to 410 °F).]	648-136-00-5	309-749-0	100801-66-9	J, M
Extract residues (coal), tar oil alk., naphthalene distn. 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	648-137-00-0	277-567-8	73665-18-6	J, M

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condensed ring aromatic hydrocarbons and aromatic nitrogen bases.]				
Tar acids, cresylic, sodium salts, caustic solns.; Alkaline Extract	648-139-00-1	272-361-4	68815-21-4	J, M
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 neutralizing 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,	648-141-00-2	266-018-8	65996-84-1	J, M

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phenanthridine, pyridine, quinoline and their alkyl derivatives.]				
Light oil (coal), coke-oven; Crude benzole; [The volatile organic liquid extracted from the gas evolved in the high temperature (greater than 700 °C (1 292 °F)) destructive distillation of coal. Composed primarily of benzene, toluene, and xylenes. May contain other minor hydrocarbon constituents.]	648-147-00-5	266-012-5	65996-78-3	J
Distillates (coal), liq. solvent extn., primary; [The liquid product of condensation of vapors emitted during the digestion of coal in a liquid solvent and boiling in the range of approximately 30 °C to 300 °C (86 °F to 572 °F). Composed primarily of partly hydrogenated condensed-ring aromatic hydrocarbons, aromatic compounds containing	648-148-00-0	302-688-0	94114-52-0	J

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<p>nitrogen, oxygen and sulfur, and their alkyl derivatives having carbon numbers predominantly in the range of C₄ through C₁₄.]</p>				
<p>Distillates (coal), solvent extn., hydrocracked; [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 °C to 300 °C (86 °F to 572 °F). Composed primarily of aromatic, hydrogenated aromatic and naphthenic compounds, their alkyl derivatives and alkanes with carbon numbers predominantly in the range of C₄ through C₁₄. Nitrogen, sulfur and oxygen-containing aromatic and hydrogenated aromatic compounds are also present.]</p>	<p>648-149-00-6</p>	<p>302-689-6</p>	<p>94114-53-1</p>	<p>J</p>

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Naphtha (coal), solvent extn., 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 °C to 180 °C (86 °F to 356 °F). Composed primarily of aromatic, hydrogenated aromatic and naphthenic compounds, their alkyl derivatives and alkanes with carbon numbers predominantly in the range of C ₄ to C ₉ . Nitrogen, sulfur and oxygen-containing aromatic and hydrogenated aromatic compounds are also present.]	648-150-00-1	302-690-1	94114-54-2	J
Distillates (coal), solvent extn., hydrocracked middle; [Distillate obtained from the hydrocracking of coal extract or solution produced by the	648-152-00-2	302-692-2	94114-56-4	J

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<p>liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 180 °C to 300 °C (356 °F to 572 °F). Composed primarily of two-ring 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 oxygen-containing compounds are also present.]</p>				
<p>Distillates (coal), solvent extn., 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 °C to 280 °C (356 °F to 536</p>	<p>648-153-00-8</p>	<p>302-693-8</p>	<p>94114-57-5</p>	<p>J</p>

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°F). Composed primarily of hydrogenated two- ring carbon compounds and their alkyl derivatives having carbon numbers predominantly in the range of C ₉ through C ₁₄ .]				
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 (1 292 °F)) destructive distillation of coal. Composed primarily of C ₆₋₁₀ hydrocarbons.]	648-156-00-4	292-635-7	90641-11-5	J]
Gases (petroleum), catalytic cracked naphtha depropaniser overhead, C ₃ -rich acid-free; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of catalytic cracked hydrocarbons and treated to remove acidic impurities. It consists of hydrocarbons having carbon	649-062-00-6	270-755-0	68477-73-6	[F ² H,] K

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numbers in the range of C ₂ through C ₄ , predominantly C ₃ .)				
Gases (petroleum), catalytic cracker; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of the products from a catalytic cracking process. It consists predominantly of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-063-00-1	270-756-6	68477-74-7	[² H,] K
Gases (petroleum), catalytic cracker, C ₁₋₅ -rich; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from a catalytic cracking process. It consists of aliphatic hydrocarbons having carbon numbers in the range of C ₁ through C ₆ , predominantly C ₁ through C ₅ .)	649-064-00-7	270-757-1	68477-75-8	[² H,] K
Gases (petroleum), catalytic	649-065-00-2	270-758-7	68477-76-9	[² H,] K

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<p>polymd. naphtha stabiliser overhead, C₂₋₄-rich; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation stabilisation of catalytic polymerised naphtha. It consists of aliphatic hydrocarbons having carbon numbers in the range of C₂ through C₆, predominantly C₂ through C₄.)</p>				
<p>Gases (petroleum), catalytic reformer, C₁₋₄-rich; Petroleum gas (A complex combination of hydrocarbons produced by distillation of products from a catalytic reforming process. It consists of hydrocarbons having carbon numbers in the range of C₁ through C₆, predominantly C₁ through C₄.)</p>	649-066-00-8	270-760-8	68477-79-2	[F ² H,] K
<p>Gases (petroleum), C₃₋₅ olefinic-paraffinic</p>	649-067-00-3	270-765-5	68477-83-8	[F ² H,] K

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alkylation feed; Petroleum gas (A complex combination of olefinic and paraffinic hydrocarbons having carbon numbers in the range of C ₃ through C ₅ which are used as alkylation feed. Ambient temperatures normally exceed the critical temperature of these combinations.)				
Gases (petroleum), C ₄ -rich; Petroleum gas (A complex combination of hydrocarbons produced by distillation of products from a catalytic fractionation process. It consists of aliphatic hydrocarbons having carbon numbers in the range of C ₃ through C ₅ , predominantly C ₄ .)	649-068-00-9	270-767-6	68477-85-0	[F ² H,] K
Gases (petroleum), deethaniser overheads; Petroleum gas (A complex combination of hydrocarbons produced from	649-069-00-4	270-768-1	68477-86-1	[F ² H,] K

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distillation of the gas and gasoline fractions from the catalytic cracking process. It contains predominantly ethane and ethylene.)				
Gases (petroleum), deisobutaniser tower overheads; Petroleum gas (A complex combination of hydrocarbons produced by the atmospheric distillation of a butane-butylene stream. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₄ .)	649-070-00-X	270-769-7	68477-87-2	[F ² H,] K
Gases (petroleum), depropaniser dry, propene-rich; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from the gas and gasoline fractions of a catalytic cracking process. It consists predominantly of propylene with some ethane and propane.)	649-071-00-5	270-772-3	68477-90-7	[F ² H,] K

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<p>Gases (petroleum), depropaniser overheads; Petroleum gas (A complex combination of hydrocarbons produced by distillation of products from the gas and gasoline fractions of a catalytic cracking process. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C₂ through C₄.)</p>	649-072-00-0	270-773-9	68477-91-8	[F ² H,] K
<p>Gases (petroleum), gas recovery plant depropaniser overheads; Petroleum gas (A complex combination of hydrocarbons obtained by fractionation of miscellaneous hydrocarbon streams. It consists predominantly of hydrocarbons having carbon numbers in the range of C₁ through C₄, predominantly propane.)</p>	649-073-00-6	270-777-0	68477-94-1	[F ² H,] K
<p>Gases (petroleum), Girbatol unit</p>	649-074-00-1	270-778-6	68477-95-2	[F ² H,] K]

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feed; Petroleum gas (A complex combination of hydrocarbons that is used as the feed into the Girbatol unit to remove hydrogen sulfide. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₄ .)				
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