[^{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).

Appendix 4

[^{F1}Entry 29 — Mutagens: category 1B ^{F1}.../category 2 ^{F1}...]

ANNEX XVII Table 4: rows 301 - 350

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$[^{F1}$ Naphtha (petroleum), full- range alkylate; Low boiling point modified naphtha; [A complex combination of hydrocarbons produced by distillation of the reaction products of isobutane with monoolefinic hydrocarbons usually ranging in carbon numbers from C ₃ through C 5 . It consists of predominantly branched chain saturated hydrocarbons having carbon numbers predominantly in the range of C ₇ through C 12 and boiling in the range of approximately 90 °C to 220 °C (194 °F to 428	649-274-00-9	265-066-7	64741-64-6	Р
(194 °F to 428 °F).]				
Naphtha (petroleum), heavy alkylate; Low boiling point modified naphtha; [A complex combination of hydrocarbons produced by distillation of the	649-275-00-4	265-067-2	64741-65-7	Ρ

reaction products of isobutane with monoolefinic hydrocarbons usually ranging in carbon numbers from C $_3$ to C $_5$. It consists of predominantly branched chain saturated hydrocarbons having carbon numbers predominantly in the range of C $_9$ through C $_{12}$ and boiling in the range of approximately $150 ^{\circ}$ C to $220 ^{\circ}$ C ($302 ^{\circ}$ F to $428 ^{\circ}$ F).]				
Naphtha (petroleum), light alkylate; Low boiling point modified naphtha; [A complex combination of hydrocarbons produced by distillation of the reaction products of isobutane with monoolefinic hydrocarbons usually ranging in carbon numbers from C 3 through C 5 . It consists of predominantly branched chain saturated hydrocarbons having carbon numbers predominantly in the range of	649-276-00-X	265-068-8	64741-66-8	Ρ

C ₇ through C ₁₀ and boiling in the range of approximately 90 °C to 160 °C (194 °F to 320 °F).]				
Naphtha (petroleum), isomerization; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained from catalytic isomerization of straight chain paraffinic C 4 through C 6 hydrocarbons. It consists predominantly of saturated hydrocarbons such as isobutane, isopentane, 2,2- dimethylpentane, and 3- methylpentane.]	649-277-00-5	265-073-5	64741-70-4	P
Naphtha (petroleum), solvent-refined light; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists predominantly	649-278-00-0	265-086-6	64741-84-0	P

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of aliphatic hydrocarbons having carbon numbers predominantly in the range of C 5 through C 11 and boiling in the range of approximately 35 °C to 190 °C (95 °F to 374 °F).]				
Naphtha (petroleum), solvent-refined heavy; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists predominantly of aliphatic hydrocarbons having carbon numbers predominantly in the range of C 7 through C 12 and boiling in the range of approximately 90 °C to 230 °C (194 °F to 446 °F).]	649-279-00-6	265-095-5	64741-92-0	P
Raffinates (petroleum), catalytic reformer ethylene glycol-water countercurrent exts.;	649-280-00-1	270-088-5	68410-71-9	P

Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained as the raffinate from the UDEX extraction process on the catalytic reformer stream. It consists of saturated hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₉ .]				
Raffinates (petroleum), reformer, Lurgi unit-sepd.; Low boiling point modified naphtha; [The complex combination of hydrocarbons obtained as a raffinate from a Lurgi separation unit. It consists predominantly of non-aromatic hydrocarbons with various small amounts of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₈ .]	649-281-00-7	270-349-3	68425-35-4	P
Naphtha (petroleum), full- range alkylate, butane-contg.;	649-282-00-2	271-267-0	68527-27-5	Ρ

Low boiling point modified naphtha; [A complex combination of hydrocarbons produced by the distillation of the reaction products of isobutane with monoolefinic hydrocarbons usually ranging in carbon numbers from C $_3$ through C $_5$. It consists of predominantly branched chain saturated hydrocarbons having carbon numbers predominantly in the range of C $_7$ through C $_{12}$ with some butanes and boiling in the range of approximately $35 \ ^{\circ}$ C to 200 $\ ^{\circ}$ C (95 $\ ^{\circ}$ F to 428 $\ ^{\circ}$ F).]				
Distillates (petroleum), naphtha steam cracking- derived, solvent- refined light hydrotreated; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained as the raffinates from a solvent extraction process of	649-283-00-8	295-315-5	91995-53-8	P

hydrotreated light distillate from steam- cracked naphtha.]				
Naphtha (petroleum), C ₄₋₁₂ butane- alkylate, isooctane-rich; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained by alkylation of butanes. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C 4 through C ₁₂ , rich in isooctane, and boiling in the range of approximately 35 °C to 210 °C (95 °F to 410 °F).]	649-284-00-3	295-430-0	92045-49-3	P
Hydrocarbons, hydrotreated light naphtha distillates, solvent-refined; Low boiling point modified naphtha; [A combination of hydrocarbons obtained from the distillation of hydrotreated naphtha followed by a solvent extraction and distillation process.	649-285-00-9	295-436-3	92045-55-1	Ρ

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It consists predominantly of saturated hydrocarbons boiling in the range of approximately 94 °C to 99 °C (201 °F to 210 °F).]				
Naphtha (petroleum), isomerization, C 6 -fraction; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained by distillation of a gasoline which has been catalytically isomerized. It consists predominantly of hexane isomers boiling in the range of approximately 60 °C to 66 °C (140 °F to 151 °F).]	649-286-00-4	295-440-5	92045-58-4	P
Hydrocarbons, C ₆₋₇ , naphtha- cracking, solvent-refined; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained by the sorption of benzene from a catalytically fully hydrogenated benzene-rich	649-287-00-X	295-446-8	92045-64-2	Р

hydrocarbon cut that was distillatively obtained from prehydrogenated cracked naphtha. It consists predominantly of paraffinic and naphthenic hydrocarbons having carbon numbers predominantly in the range of C 6 through C 7 and boiling in the range of approximately 70 °C to 100 °C (158 °F to 212 °F).]				
Hydrocarbons, C ₆ -rich, hydrotreated light naphtha distillates, solvent-refined; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained by distillation of hydrotreated naphtha followed by solvent extraction. It consists predominantly of saturated hydrocarbons and boiling in the range of approximately 65 °C to 70 °C (149 °F to 158 °F).]	649-288-00-5	309-871-4	101316-67-0	P

Naphtha (petroleum), heavy catalytic cracked; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons produced by a distillation of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C 6 through C 12 and boiling in the range of approximately 65 °C to 230 °C (148 °F to 446 °F). It contains a relatively large proportion of unsaturated hydrocarbons.]	649-289-00-0	265-055-7	64741-54-4	P
Naphtha (petroleum), light catalytic cracked; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons produced by the distillation of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly	649-290-00-6	265-056-2	64741-55-5	P

in the range of C 4 through C 11 and boiling in the range of approximately – 20 °C to 190 °C (-4 °F to 374 °F). It contains a relatively large proportion of unsaturated hydrocarbons.]				
Hydrocarbons, C $_{3-11}$, catalytic cracker distillates; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons produced by the distillations of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C $_3$ through C $_{11}$ and boiling in a range approximately up to 204 °C (400 °F).]	649-291-00-1	270-686-6	68476-46-0	Р
Naphtha (petroleum), catalytic cracked light distd.; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons produced by the distillation	649-292-00-7	272-185-8	68783-09-5	Ρ

of products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C $_1$ through C $_5$]				
Distillates (petroleum), naphtha steam cracking- derived, hydrotreated light arom.; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons obtained by treating a light distillate from steam- cracked naphtha. It consists predominantly of aromatic hydrocarbons]	649-293-00-2	295-311-3	91995-50-5	P
Naphtha (petroleum), heavy catalytic cracked, sweetened; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons obtained by subjecting a catalytic cracked petroleum distillate to a sweetening process to convert mercaptans	649-294-00-8	295-431-6	92045-50-6	P

or to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₆ through C 12 and boiling in the range of approximately 60 °C to 200 °C (140 °F to 392 °F).]				
Naphtha (petroleum), light catalytic cracked sweetened; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons obtained by subjecting naphtha from a catalytic cracking process to a sweetening process to convert mercaptans or to remove acidic impurities. It consists predominantly of hydrocarbons boiling in a range of approximately 35 °C to 210 °C (95 °F to 410 °F).]	649-295-00-3	295-441-0	92045-59-5	P
Hydrocarbons, C ₈₋₁₂ , catalytic-	649-296-00-9	295-794-0	92128-94-4	Р

cracking, chem. neutralized; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons produced by the distillation of a cut from the catalytic cracking process, having undergone an alkaline washing. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₈ through C ₁₂ and boiling in the range of approximately 130 °C to 210 °C (266 °F to 410 °F).]				
Hydrocarbons, C ₈₋₁₂ , catalytic cracker distillates; Low boiling point cat-cracked naphtha; [A complex combination of hydrocarbons obtained by distillation of products from a catalytic cracking process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of	649-297-00-4	309-974-4	101794-97-2	Р

C 8 through C 12 and boiling in the range of approximately 140 °C to 210 °C (284 °F to 410 °F).] Hydrocarbons, C 8-12, catalytic	649-298-00-X	309-987-5	101896-28-0	P
cracking, chem. neutralized, sweetened; Low boiling point cat-cracked naphtha				
Naphtha (petroleum), light catalytic reformed; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons produced from the distillation of products from a catalytic reforming process. It consists of hydrocarbons having carbon numbers predominantly in the range of C $_5$ through C 11 and boiling in the range of approximately 35 °C to 190 °C (95 °F to 374 °F). It contains a relatively large proportion of aromatic and branched chain hydrocarbons. This stream	649-299-00-5	265-065-1	64741-63-5	P

may contain 10 vol. % or more benzene.]				
Naphtha (petroleum), heavy catalytic reformed; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons produced from the distillation of products from a catalytic reforming process. It consists of predominantly aromatic hydrocarbons having carbon numbers predominantly in the range of C 7 through C 12 and boiling in the range of approximately 90 °C to 230 °C (194 °F to 446 °F).]	649-300-00-9	265-070-9	64741-68-0	Р
Distillates (petroleum), catalytic reformed depentanizer; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons from the distillation of products from a catalytic reforming	649-301-00-4	270-660-4	68475-79-6	Р

process. It consists predominantly of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₆ and boiling in the range of approximately – 49 °C to 63 °C (– 57 °F to 145 °F).]				
Hydrocarbons, C 2-6, C 6-8 catalytic reformer; Low boiling point cat- reformed naphtha;	649-302-00-X	270-687-1	68476-47-1	Р
Residues (petroleum), C $_{6-8}$ catalytic reformer; Low boiling point cat- reformed naphtha; [A complex residuum from the catalytic reforming of C $_{6-8}$ feed. It consists of hydrocarbons having carbon numbers predominantly in the range of C $_2$ through C $_6$.]	649-303-00-5	270-794-3	68478-15-9	P
Naphtha (petroleum), light catalytic reformed, arom free; Low boiling point cat-	649-304-00-0	270-993-5	68513-03-1	Р

reformed naphtha; [A complex combination of hydrocarbons obtained from distillation of products from a catalytic reforming process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C $_5$ through C 8 and boiling in the range of approximately 35 °C to 120 °C (95 °F to 248 °F). It contains a relatively large proportion of branched chain hydrocarbons with the aromatic components removed.]				
Distillates (petroleum), catalytic reformed straight- run naphtha overheads; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons obtained by the catalytic reforming of straight- run naphtha	649-305-00-6	271-008-1	68513-63-3	Р

followed by the fractionation of the total effluent. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C $_2$ through C $_6$.]				
Petroleum products, hydrofiner- powerformer reformates; Low boiling point cat- reformed naphtha; [The complex combination of hydrocarbons obtained in a hydrofiner- powerformer process and boiling in a range of approximately 27 °C to 210 °C (80 °F to 410 °F).]	649-306-00-1	271-058-4	68514-79-4	Р
Naphtha (petroleum), full- range reformed; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons produced by the distillation of the products from a catalytic reforming process. It consists of hydrocarbons	649-307-00-7	272-895-8	68919-37-9	P

having carbon numbers predominantly in the range of C 5 through C 12 and boiling in the range of approximately 35 °C to 230 °C (95 °F to 446 °F).]				
Naphtha (petroleum), catalytic reformed; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons produced by the distillation of products from a catalytic reforming process. It consists of hydrocarbons having carbon numbers predominantly in the range of C $_4$ through C 12 and boiling in the range of approximately 30 °C to 220 °C (90 °F to 430 °F). It contains a relatively large proportion of aromatic and branched chain hydrocarbons. This stream may contain 10 vol. % or more benzene.]	649-308-00-2	273-271-8	68955-35-1	Ρ

Distillates (petroleum), catalytic reformed hydrotreated light, C $_{8-12}$ arom. fraction; Low boiling point cat- reformed naphtha; [A complex combination of alkylbenzenes obtained by the catalytic reforming of petroleum naphtha. It consists predominantly of alkylbenzenes having carbon numbers predominantly in the range of C $_8$ through C 10 and boiling in the range of approximately 160 °C to 180 °C (320 °F to 356 °F).]	649-309-00-8	285-509-8	85116-58-1	P
Aromatic hydrocarbons, C ₈ , catalytic reforming- derived; Low boiling point cat- reformed naphtha	649-310-00-3	295-279-0	91995-18-5	Р
Aromatic hydrocarbons, C 7-12, C 8 -rich; Low boiling point cat- reformed naphtha; [A complex combination of	649-311-00-9	297-401-8	93571-75-6	Р

hydrocarbons obtained by separation from the platformate- containing fraction. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C 7 through C 12 (primarily C 8) and can contain nonaromatic hydrocarbons, both boiling in the range of approximately 130 °C to 200 °C (266 °F to 392 °F).]				
Gasoline, C $_{5-11}$, high- octane stabilized reformed; Low boiling point cat- reformed naphtha; [A complex high octane combination of hydrocarbons obtained by the catalytic dehydrogenation of a predominantly naphthenic naphtha. It consists predominantly of aromatics and non- aromatics having carbon numbers predominantly in the range of	649-312-00-4	297-458-9	93572-29-3	P

C 5 through C 11 and boiling in the range of approximately 45 °C to 185 °C (113 °F to 365 °F).]				
Hydrocarbons, C $_{7-12}$, C $_{>9}$ -aromrich, reforming heavy fraction; Low boiling point cat- reformed naphtha; [A complex combination of hydrocarbons obtained by separation from the platformate- containing fraction. It consists predominantly of nonaromatic hydrocarbons having carbon numbers predominantly in the range of C $_{7}$ through C $_{12}$ and boiling in the range of approximately 120 °C to 210 °C (248 °F to 380 °F) and C $_{9}$ and higher aromatic hydrocarbons,	649-313-00-X 649-314-00-5	297-465-7	93572-35-1	P
Hydrocarbons, C 5-11 , nonaromsrich, reforming light fraction; Low boiling point cat- reformed naphtha;	049-314-00-3	297-400-2	93372-30-2	r

[A complex combination of hydrocarbons obtained by separation from the platformate- containing fraction. It consists predominantly of nonaromatic hydrocarbons having carbon numbers predominantly in the range of C $_5$ through C 11 and boiling in the range of approximately 35 °C to 125 °C (94 °F to 257 °F), benzene and toluene.]				
Naphtha (petroleum), light thermal cracked; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons from distillation of products from a thermal cracking process. It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly in the range of C $_4$ through C 8 and boiling in the range of approximately – 10 °C to 130 °C	649-316-00-6	265-075-6	64741-74-8	P

(14 °F to 266 °F).]				
Naphtha (petroleum), heavy thermal cracked; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons from distillation of the products from a thermal cracking process. It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly in the range of C 6 through C 12 and boiling in the range of approximately 65 °C to 220 °C (148 °F to 428 °F).]	649-317-00-1	265-085-0	64741-83-9	P
Distillates (petroleum), heavy arom.; Low boiling point thermally cracked naphtha; [The complex combination of hydrocarbons from the distillation of the products from the thermal cracking of ethane and propane. This higher boiling fraction consists predominantly of C 5-7 aromatic	649-318-00-7	267-563-4	67891-79-6	P

hydrocarbons with some unsaturated aliphatic hydrocarbons having carbon number predominantly of C 5. This stream may contain benzene.]				
Distillates (petroleum), light arom.; Low boiling point thermally cracked naphtha; [The complex combination of hydrocarbons from the distillation of the products from the thermal cracking of ethane and propane. This lower boiling fraction consists predominantly of C $_{5-7}$ aromatic hydrocarbons with some unsaturated aliphatic hydrocarbons having a carbon number predominantly of C $_{5}$. This stream may contain benzene.]		267-565-5	67891-80-9	P
Distillates (petroleum), naphtha-raffinate pyrolyzate- derived, gasoline- blending;	649-320-00-8	270-344-6	68425-29-6	P

Low boiling point thermally cracked naphtha; [The complex combination of hydrocarbons obtained by the pyrolysis fractionation at 816 °C (1 500 °F) of naphtha and raffinate. It consists predominantly of hydrocarbons having a carbon number of C 9 and boiling at approximately 204 °C (400 °F).]				
Aromatic hydrocarbons, C $_{6-8}$, naphtha- raffinate pyrolyzate- derived; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons obtained by the fractionation pyrolysis at 816 °C (1 500 °F) of naphtha and raffinate. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C $_6$ through C 8, including	649-321-00-3	270-658-3	68475-70-7	P

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Distillates (petroleum), thermal cracked naphtha and gas oil; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons produced by distillation of thermally cracked naphtha and/or gas oil. It consists predominantly of olefinic hydrocarbons having a carbon number of C 5 and boiling in the range of approximately 33 °C to 60 °C (91 °F to 140 °F).]	649-322-00-9	271-631-9	68603-00-9	P
Distillates (petroleum), thermal cracked naphtha and gas oil, C 5 -dimer- contg.; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons produced by the extractive distillation of thermal cracked naphtha and/or gas oil. It consists predominantly of hydrocarbons having a carbon number of C 5 with some	649-323-00-4	271-632-4	68603-01-0	P

dimerized C 5 olefins and boiling in the range of approximately 33 °C to 184 °C (91 °F to 363 °F).]				
Distillates (petroleum), thermal cracked naphtha and gas oil, extractive; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons produced by the extractive distillation of thermal cracked naphtha and/ or gas oil. It consists of paraffinic and olefinic hydrocarbons, predominantly isoamylenes such as 2- methyl-1- butene and 2- methyl-2-butene and boiling in the range of approximately 31 °C to 40 °C (88 °F to 104 °F).]	649-324-00-X	271-634-5	68603-03-2	P]]

Changes to legislation:

This version of this Regulation was derived from EUR-Lex on IP completion day (31 December 2020 11:00 p.m.). It has not been amended by the UK since then. Find out more about legislation originating from the EU as published on legislation.gov.uk.