

Appendices 1 to 6

FOREWORD

Explanations of column headings*Substances:*

The name is the same as that used for the substance in Annex I to Directive 67/548/EEC. Whenever possible dangerous substances are designated by their EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of Notified Chemical Substances) names. These are referred to as EC numbers in the table. Other entries not listed in EINECS or ELINCS are designated using an internationally recognised chemical name (e.g. ISO, IUPAC). An additional common name is included in some cases.

Index number:

The index number is the identification code given to the substance in Annex I of Directive 67/548/EEC. Substances are listed in the Appendix according to this index number.

EINECS number:

For each substance listed in the EINECS there is an identification code. The code starts at 200-001 8.

ELINCS number

For each new substance notified under the Directive 67/548/EEC an identification code has been defined and published in the ELINCS. The code starts at 400-010-9.

CAS number:

Chemical Abstracts Service (CAS) numbers have been defined for substances to help in their identification.

Notes:

The full text of the notes can be found in the Foreword of Annex I to Directive 67/548/EEC.

The notes to be taken into account for the purposes of this Regulation are the following:

Note A:

The name of the substance must appear on the label in the form of one of the designations given in Annex I to Directive 67/548/EEC (see Article 23(2)(a) of that Directive).

In Annex I to Directive 67/548/EEC, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the manufacturer or any other person who places such a substance on the market is required to state on the label the correct name, due account being taken of the Chapter entitled 'Nomenclature' of the Foreword to that Annex.

Directive 67/548/EEC also requires that the symbols, indications of danger, R- and S-phrases to be used for each substance shall be those shown in Annex I to that Directive (Article 23(2)(c), (d) and (e) of that Directive).

For substances belonging to one particular group of substances included in Annex I to Directive 67/548/EEC, the symbols, indications of danger, R- and S-phrases to be used for each substance shall be those shown in the appropriate entry in that Annex.

For substances belonging to more than one group of substances included in Annex I to Directive 67/548/EEC, the symbols, indications of danger, R- and S-phrases to be used for each substance shall be those shown in both the appropriate entries given in that Annex. In cases where two different classifications are given in the two entries for the same hazard, the classification reflecting the more severe hazard classification shall be used.

Note C:

Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers.

Note D:

Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Annex I to Directive 67/548/EEC.

However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the manufacturer or any person who places such a substance on the market must state on the label the name of the substance followed by the words 'non-stabilised'.

Note E:

Substances with specific effects on human health (see chapter 4 of Annex VI of Directive 67/548/EEC) that are classified as carcinogenic, mutagenic and/or toxic for reproduction in categories 1 or 2 are ascribed Note E if they are also classified as very toxic (T+), toxic (T) or harmful (Xn). For these substances, the risk phrases R20, R21, R22, R23, R24, R25, R26, R27, R28, R39, R68 (harmful), R48 and R65 and all combinations of these risk phrases shall be preceded by the word 'Also'.

Note H:

The classification and label shown for this substance applies to the dangerous property(ies) indicated by the risk phrase(s) in combination with the category(ies) of danger shown. The requirements of Article 6 of Directive 67/548/EEC on manufacturers, distributors, and importers of this substance apply to all other aspects of classification and labelling. The final label shall follow the requirements of section 7 of Annex VI to Directive 67/548/EEC.

This note applies to certain coal- and oil-derived substances and to certain entries for groups of substances in Annex I to Directive 67/548/EEC.

Note J:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7).

Note K:

The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w 1,3-butadiene (EINECS No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the S-phrases (2-)9-16 should apply. This note applies to certain complex oil-derived substances in Annex I to Directive 67/548/EC

Note L:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Note M:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0,005 % w/w benzo[a]-pyrene (EINECS No 200-028-5).

Note N:

The classification as a carcinogen need not apply if the full refining history is known and it can be shown that the substance from which it is produced is not a carcinogen.

Note P:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7).

Note R:

The classification as a carcinogen need not apply to fibres with a length weighted geometric mean diameter, less two standard errors, greater than 6µm.

Note S:

This substance may not require a label according to Article 23 of Directive 67/548/EEC (see section 8 of Annex VI of that Directive).

Appendix 1

Point 28 — Carcinogens: category 1

Substances	Index No	EC No	CAS No	Notes
Chromium (VI) trioxide	024-001-00-0	215-607-8	1333-82-0	E
Zinc chromates including zinc potassium chromate	024-007-00-3			
Nickel monoxide	028-003-00-2	215-215-7	1313-99-1	
Nickel dioxide	028-004-00-8	234-823-3	12035-36-8	
Dinickel trioxide	028-005-00-3	215-217-8	1314-06-3	
Nickel sulphide	028-006-00-9	240-841-2	16812-54-7	
Nickel subsulphide	028-007-00-4	234-829-6	12035-72-2	
Diarsenic trioxide; arsenic trioxide	033-003-00-0	215-481-4	1327-53-3	
Arsenic pentoxide; arsenic oxide	033-004-00-6	215-116-9	1303-28-2	
Arsenic acid and its salts	033-005-00-1			
Lead hydrogen arsenate	082-011-00-0	232-064-2	7784-40-9	
Butane [containing ≥ 0,1 % Butadiene (203-450-8)] [1]	601-004-01-8	203-448-7 [1]	106-97-8 [1]	C, S
Isobutane [containing ≥ 0,1 % Butadiene (203-450-8)] [2]		200-857-2 [2]	75-28-5 [2]	
1,3-Butadiene; buta-1,3-diene	601-013-00-X	203-450-8	106-99-0	D
Benzene	601-020-00-8	200-753-7	71-43-2	E
Triethyl arsenate	601-067-00-4	427-700-2	15606-95-8	
Vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4	
Bis (chloromethyl) ether	603-046-00-5	208-832-8	542-88-1	
Chloromethyl methyl ether; chlorodimethyl ether	603-075-00-3	203-480-1	107-30-2	
2-Naphthylamine; beta-naphthylamine	612-022-00-3	202-080-4	91-59-8	E
Benzidine; 4,4'-diaminobiphenyl; biphenyl-4,4'-ylenediamine	612-042-00-2	202-199-1	92-87-5	E
Salts of benzidine	612-070-00-5			
Salts of 2-naphthylamine	612-071-00-0	209-030-0[1] 210-313-6[2]	553-00-4[1] 612-52-2[2]	
Biphenyl-4-ylamine; xenylamine; 4-aminobiphenyl	612-072-00-6	202-177-1	92-67-1	
Salts of biphenyl-4-ylamine; salts of xenylamine; salts of 4-aminobiphenyl	612-073-00-1			
Tar, coal; Coal tar (The by-product from the destructive distillation of coal. Almost black semisolid. A complex combination of aromatic hydro-carbons, phenolic compounds, nitrogen bases and thiophene.)	648-081-00-7	232-361-7	8007-45-2	

Substances	Index No	EC No	CAS No	Notes
<p>Tar, coal, high-temperature; Coal tar</p> <p>(The condensation product obtained by cooling, to approximately ambient temperature, the gas evolved in the high temperature (greater than 700 °C) destructive distillation of coal. A black viscous liquid denser than water. Composed primarily of a complex mixture of condensed ring aromatic hydrocarbons. May contain minor amounts of phenolic compounds and aromatic nitrogen bases.)</p>	648-082-00-2	266-024-0	65996-89-6	
<p>Tar, coal, low-temperature; Coal oil</p> <p>(The condensation product obtained by cooling, to approximately ambient temperature, the gas evolved in low temperature (less than 700 °C) destructive distillation of coal. A black viscous liquid denser than water. Composed primarily of condensed ring aromatic hydrocarbons, phenolic compounds, aromatic nitrogen bases, and their alkyl derivatives.)</p>	648-083-00-8	266-025-6	65996-90-9	
<p>Tar brown-coal;</p> <p>(An oil distilled from brown-coal tar. Composed primarily of aliphatic, naphthenic and one- to three-ring aromatic hydrocarbons, their alkyl derivatives, heteroaromatics and one- and two-ring phenols boiling in the range of approximately 150 °C to 360 °C.)</p>	648-145-00-4	309-885-0	101 316-83-0	
<p>Tar, brown-coal, low temperature;</p> <p>(A tar obtained from low temperature carbonisation and low temperature gasification of brown coal. Composed primarily of aliphatic, naphthenic and cyclic aromatic hydrocarbons, heteroaromatic hydrocarbons and cyclic phenols.)</p>	648-146-00-X	309-886-6	101 316-84-1	
<p>Distillates (petroleum), light paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by vacuum distillation of the residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀ and produces a finished oil with a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains a relatively large proportion of saturated aliphatic hydrocarbons normally present in this distillation range of crude oil.)</p>	649-050-00-0	265-051-5	64741-50-0	
<p>Distillates (petroleum), heavy paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by vacuum distillation of the residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains a relatively large proportion of saturated aliphatic hydrocarbons.)</p>	649-051-00-6	265-052-0	64741-51-1	
<p>Distillates (petroleum), light naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by vacuum distillation of the residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀, and produces a finished oil with a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-052-00-1	265-053-6	64741-52-2	

Substances	Index No	EC No	CAS No	Notes
<p>Distillates (petroleum), heavy naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by vacuum distillation of the residuum from atmospheric distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-053-00-7	265-054-1	64741-53-3	
<p>Distillates (petroleum), acid-treated heavy naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons obtained as a raffinate from a sulfuric acid treating process. It consists of hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-054-00-2	265-117-3	64742-18-3	
<p>Distillates (petroleum), acid-treated light naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons obtained as a raffinate from a sulfuric acid treating process. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀, and produces a finished oil with a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-055-00-8	265-118-9	64742-19-4	
<p>Distillates (petroleum), acid-treated heavy paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons obtained as a raffinate from a sulfuric acid process. It consists predominantly of saturated hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C.)</p>	649-056-00-3	265-119-4	64742-20-7	
<p>Distillates (petroleum), acid-treated light paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons obtained as a raffinate from a sulfuric acid treating process. It consists predominantly of saturated hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀ and produces a finished oil having a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C.)</p>	649-057-00-9	265-121-5	64742-21-8	
<p>Distillates (petroleum), chemically neutralised heavy paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons obtained from a treating process to remove acidic materials. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains a relatively large proportion of aliphatic hydrocarbons.)</p>	649-058-00-4	265-127-8	64742-27-4	
<p>Distillates (petroleum), chemically neutralised light paraffinic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by a treating process to remove acidic materials. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀, and produces a finished oil with a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C.)</p>	649-059-00-X	265-128-3	64742-28-5	

Substances	Index No	EC No	CAS No	Notes
<p>Distillates (petroleum), chemically neutralised heavy naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by a treating process to remove acidic materials. It consists of hydrocarbons having carbon numbers predominantly in the range of C₂₀ through C₅₀, and produces a finished oil with a viscosity of at least 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-060-00-5	265-135-1	64742-34-3	
<p>Distillates (petroleum), chemically neutralised light naphthenic; Unrefined or mildly refined base oil</p> <p>(A complex combination of hydrocarbons produced by a treating process to remove acidic materials. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁₅ through C₃₀, and produces a finished oil with a viscosity of less than 19 10⁻⁶ m².s⁻¹ at 40 °C. It contains relatively few normal paraffins.)</p>	649-061-00-0	265-136-7	64742-35-4	
<p>Gases (petroleum), catalytic cracked naphtha depropaniser overhead, C₃-rich acid-free; Petroleum gas</p> <p>(A complex combination of hydrocarbons obtained from fractionation of catalytic cracked hydrocarbons and treated to remove acidic impurities. It consists of hydrocarbons having carbon numbers in the range of C₂ through C₄, predominantly C₃.)</p>	649-062-00-6	270-755-0	68477-73-6	H, K
<p>Gases (petroleum), catalytic cracker; Petroleum gas</p> <p>(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 C₁ through C₆.)</p>	649-063-00-1	270-756-6	68477-74-7	H, K
<p>Gases (petroleum), catalytic cracker, C_{1,5}-rich; Petroleum gas</p> <p>(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 C₁ through C₆, predominantly C₁ through C₅.)</p>	649-064-00-7	270-757-1	68477-75-8	H, K
<p>Gases (petroleum), catalytic polymd. naphtha stabiliser overhead, C_{2,4}-rich; Petroleum gas</p> <p>(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>	649-065-00-2	270-758-7	68477-76-9	H, K
<p>Gases (petroleum), catalytic reformer, C_{1,4}-rich; Petroleum gas</p> <p>(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	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), C _{3,5} olefinic-paraffinic 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.)	649-067-00-3	270-765-5	68477-83-8	H, K
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	H, K
Gases (petroleum), deethaniser overheads; Petroleum gas (A complex combination of hydrocarbons produced from distillation of the gas and gasoline fractions from the catalytic cracking process. It contains predominantly ethane and ethylene.)	649-069-00-4	270-768-1	68477-86-1	H, K
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	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	H, K
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 C ₂ through C ₄ .)	649-072-00-0	270-773-9	68477-91-8	H, K
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 C ₁ through C ₄ , predominantly propane.)	649-073-00-6	270-777-0	68477-94-1	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), Girbatol unit 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 .)	649-074-00-1	270-778-6	68477-95-2	H, K
Gases (petroleum), isomerised naphtha fractionator, C ₄ -rich, hydrogen sulfide-free; Petroleum gas	649-075-00-7	270-782-8	68477-99-6	H, K
Tail gas (petroleum), catalytic cracked clarified oil and thermal cracked vacuum residue fractionation reflux drum; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of catalytic cracked clarified oil and thermal cracked vacuum residue. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-076-00-2	270-802-5	68478-21-7	H, K
Tail gas (petroleum), catalytic cracked naphtha stabilisation absorber; Petroleum gas (A complex combination of hydrocarbons obtained from the stabilisation of catalytic cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-077-00-8	270-803-0	68478-22-8	H, K
Tail gas (petroleum), catalytic cracker, catalytic reformer and hydrodesulphuriser combined fractionator; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation of products from catalytic cracking, catalytic reforming and hydrodesulphurising processes treated to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-078-00-3	270-804-6	68478-24-0	H, K
Tail gas (petroleum), catalytic reformed naphtha fractionation stabiliser; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation stabilisation of catalytic reformed naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-079-00-9	270-806-7	68478-26-2	H, K
Tail gas (petroleum), saturate gas plant mixed stream, C ₄ -rich; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation stabilisation of straight-run naphtha, distillation tail gas and catalytic reformed naphtha stabiliser tail gas. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₆ , predominantly butane and isobutane.)	649-080-00-4	270-813-5	68478-32-0	H, K
Tail gas (petroleum), saturate gas recovery plant, C _{1,2} -rich; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of distillate tail gas, straight-run naphtha, catalytic reformed naphtha stabiliser tail gas. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₁ through C ₅ , predominantly methane and ethane.)	649-081-00-X	270-814-0	68478-33-1	H, K

Substances	Index No	EC No	CAS No	Notes
Tail gas (petroleum), vacuum residues thermal cracker; Petroleum gas (A complex combination of hydrocarbons obtained from the thermal cracking of vacuum residues. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-082-00-5	270-815-6	68478-34-2	H, K
Hydrocarbons, C _{3,4} -rich, petroleum distillate; Petroleum gas (A complex combination of hydrocarbons produced by distillation and condensation of crude oil. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₅ , predominantly C ₃ through C ₄ .)	649-083-00-0	270-990-9	68512-91-4	H, K
Gases (petroleum), full-range straight-run naphtha dehexaniser off; Petroleum gas (A complex combination of hydrocarbons obtained by the fractionation of the full-range straight-run naphtha. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₆ .)	649-084-00-6	271-000-8	68513-15-5	H, K
Gases (petroleum), hydrocracking depropaniser off, hydrocarbon-rich; Petroleum gas (A complex combination of hydrocarbon produced by the distillation of products from a hydrocracking process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ . It may also contain small amounts of hydrogen and hydrogen sulfide.)	649-085-00-1	271-001-3	68513-16-6	H, K
Gases (petroleum), light straight-run naphtha stabiliser off; Petroleum gas (A complex combination of hydrocarbons obtained by the stabilisation of light straight-run naphtha. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₆ .)	649-086-00-7	271-002-9	68513-17-7	H, K
Residues (petroleum), alkylation splitter, C ₄ -rich; Petroleum gas (A complex residuum from the distillation of streams from various refinery operations. It consists of hydrocarbons having carbon numbers in the range of C ₄ through C ₅ , predominantly butane, and boiling in the range of approximately -11,7 °C to 27,8 °C.)	649-087-00-2	271-010-2	68513-66-6	H, K
Hydrocarbons, C ₁₋₄ ; Petroleum gas (A complex combination of hydrocarbons provided by thermal cracking and absorber operations and by distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ and boiling in the range of approximately - 164 °C to - 0,5 °C.)	649-088-00-8	271-032-2	68514-31-8	H, K
Hydrocarbons, C ₁₋₄ , sweetened; Petroleum gas (A complex combination of hydrocarbons obtained by subjecting hydrocarbon gases to a sweetening process to convert mercaptans or to remove acidic impurities. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ and boiling in the range of approximately - 164 °C to - 0,5 °C.)	649-089-00-3	271-038-5	68514-36-3	H, K

Substances	Index No	EC No	CAS No	Notes
Hydrocarbons, C ₁₋₃ ; Petroleum gas (A complex combination of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ and boiling in the range of approximately - 164 °C to - 42 °C.)	649-090-00-9	271-259-7	68527-16-2	H, K
Hydrocarbons, C ₁₋₄ ; debutaniser fraction; Petroleum gas	649-091-00-4	271-261-8	68527-19-5	H, K
Gases (petroleum), C ₁₋₅ , wet; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of crude oil and/or the cracking of tower gas oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-092-00-X	271-624-0	68602-83-5	H, K
Hydrocarbons, C ₂₋₄ ; Petroleum gas	649-093-00-5	271-734-9	68606-25-7	H, K
Hydrocarbons, C ₃ ; Petroleum gas	649-094-00-0	271-735-4	68606-26-8	H, K
Gases (petroleum), alkylation feed; Petroleum gas (A complex combination of hydrocarbons produced by the catalytic cracking of gas oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₄ .)	649-095-00-6	271-737-5	68606-27-9	H, K
Gases (petroleum), depropaniser bottoms fractionation off; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation of depropaniser bottoms. It consists predominantly of butane, isobutane and butadiene.)	649-096-00-1	271-742-2	68606-34-8	H, K
Gases (petroleum), refinery blend; Petroleum gas (A complex combination obtained from various processes. It consists of hydrogen, hydrogen sulfide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-097-00-7	272-183-7	68783-07-3	H, K
Gases (petroleum), catalytic cracking; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of the products from a catalytic cracking process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₅ .)	649-098-00-2	272-203-4	68783-64-2	H, K
Gases (petroleum), C ₂₋₄ , sweetened; Petroleum gas (A complex combination of hydrocarbons obtained by subjecting a petroleum distillate to a sweetening process to convert mercaptans or to remove acidic impurities. It consists predominantly of saturated and unsaturated hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₄ and boiling in the range of approximately - 51 °C to - 34 °C.)	649-099-00-8	272-205-5	68783-65-3	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), crude oil fractionation off; Petroleum gas (A complex combination of hydrocarbons produced by the fractionation of crude oil. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-100-00-1	272-871-7	68918-99-0	H, K
Gases (petroleum), dehexaniser off; Petroleum gas (A complex combination of hydrocarbons obtained by the fractionation of combined naphtha streams. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-101-00-7	272-872-2	68919-00-6	H, K
Gases (petroleum), light straight run gasoline fractionation stabiliser off; Petroleum gas (A complex combination of hydrocarbons obtained by the fractionation of light straight-run gasoline. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-102-00-2	272-878-5	68919-05-1	H, K
Gases (petroleum), naphtha unifier desulphurisation stripper off; Petroleum gas (A complex combination of hydrocarbons produced by a naphtha unifier desulphurisation process and stripped from the naphtha product. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-103-00-8	272-879-0	68919-06-2	H, K
Gases (petroleum), straight-run naphtha catalytic reforming off; Petroleum gas (A complex combination of hydrocarbons obtained by the catalytic reforming of straight-run naphtha and fractionation of the total effluent. It consists of methane, ethane, and propane.)	649-104-00-3	272-882-7	68919-09-5	H, K
Gases (petroleum), fluidised catalytic cracker splitter overheads; Petroleum gas (A complex combination of hydrocarbons produced by the fractionation of the charge to the C ₃ -C ₄ splitter. It consists predominantly of C ₃ hydrocarbons.)	649-105-00-9	272-893-7	68919-20-0	H, K
Gases (petroleum), straight-run stabiliser off; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation of the liquid from the first tower used in the distillation of crude oil. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-106-00-4	272-883-2	68919-10-8	H, K
Gases (petroleum), catalytic cracked naphtha debutaniser; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of catalytic cracked naphtha. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-107-00-X	273-169-3	68952-76-1	H, K

Substances	Index No	EC No	CAS No	Notes
Tail gas (petroleum), catalytic cracked distillate and naphtha stabiliser; Petroleum gas (A complex combination of hydrocarbons obtained by the fractionation of catalytic cracked naphtha and distillate. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-108-00-5	273-170-9	68952-77-2	H, K
Tail gas (petroleum), thermal-cracked distillate, gas oil and naphtha absorber; Petroleum gas (A complex combination of hydrocarbons obtained from the separation of thermal-cracked distillates, naphtha and gas oil. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-109-00-0	273-175-6	68952-81-8	H, K
Tail gas (petroleum), thermal cracked hydrocarbon fractionation stabiliser, petroleum coking; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation stabilisation of thermal cracked hydrocarbons from a petroleum coking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-110-00-6	273-176-1	68952-82-9	H, K
Gases (petroleum, light steam-cracked, butadiene conc.; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from a thermal cracking process. It consists of hydrocarbons having a carbon number predominantly of C ₄ .)	649-111-00-1	273-265-5	68955-28-2	H, K
Gases (petroleum), straight-run naphtha catalytic reformer stabiliser overhead; Petroleum gas (A complex combination of hydrocarbons obtained by the catalytic reforming of straight-run naphtha and the fractionation of the total effluent. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₄ .)	649-112-00-7	273-270-2	68955-34-0	H, K
Hydrocarbons, C ₄ ; Petroleum gas	649-113-00-2	289-339-5	27741-01-3	H, K
Alkanes, C ₁₋₄ , C ₃ -rich; Petroleum gas	649-114-00-8	292-456-4	90622-55-2	H, K
Gases (petroleum), steam-cracker C ₃ -rich; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from a steam cracking process. It consists predominantly of propylene with some propane and boils in the range of approximately - 70 °C to 0 °C.)	649-115-00-3	295-404-9	92045-22-2	H, K
Hydrocarbons, C ₄ , steam-cracker distillate; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of the products of a steam cracking process. It consists predominantly of hydrocarbons having a carbon number of C ₄ , predominantly 1-butene and 2-butene, containing also butane and isobutene and boiling in the range of approximately - 12 °C to 5 °C.)	649-116-00-9	295-405-4	92045-23-3	H, K

Substances	Index No	EC No	CAS No	Notes
Petroleum gases, liquefied, sweetened, C ₄ fraction; Petroleum gas (A complex combination of hydrocarbons obtained by subjecting a liquified petroleum gas mix to a sweetening process to oxidise mercaptans or to remove acidic impurities. It consists predominantly of C ₄ saturated and unsaturated hydrocarbons.)	649-117-00-4	295-463-0	92045-80-2	H, K
Raffinates (petroleum), steam-cracked C ₄ fraction cuprous ammonium acetate extraction, C _{3,5} and C _{3,5} unsaturated, butadiene-free; Petroleum gas	649-119-00-5	307-769-4	97722-19-5	H, K
Gases (petroleum), amine system feed; Refinery gas (The feed gas to the amine system for removal of hydrogen sulphide. It consists primarily of hydrogen. Carbon monoxide, carbon dioxide, hydrogen sulfide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ may also be present.)	649-120-00-0	270-746-1	68477-65-6	H, K
Gases (petroleum), benzene unit hydrodesulphuriser off; Refinery gas (Off gases produced by the benzene unit. It consists primarily of hydrogen. Carbon monoxide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ , including benzene, may also be present.)	649-121-00-6	270-747-7	68477-66-7	H, K
Gases (petroleum), benzene unit recycle, hydrogen-rich; Refinery gas (A complex combination of hydrocarbons obtained by recycling the gases of the benzene unit. It consists primarily of hydrogen with various small amounts of carbon monoxide and hydrocarbons having carbon numbers in the range of C ₁ through C ₆ .)	649-122-00-1	270-748-2	68477-67-8	H, K
Gases (petroleum), blend oil, hydrogen-nitrogen-rich; Refinery gas (A complex combination of hydrocarbons obtained by distillation of a blend oil. It consists primarily of hydrogen and nitrogen with various small amounts of carbon monoxide, carbon dioxide, and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-123-00-7	270-749-8	68477-68-9	H, K
Gases (petroleum), catalytic reformed naphtha stripper overheads; Refinery gas (A complex combination of hydrocarbons obtained from stabilisation of catalytic reformed naphtha. It consists of hydrogen and saturated hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-124-00-2	270-759-2	68477-77-0	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), C ₆₋₈ catalytic reformer recycle; Refinery gas (A complex combination of hydrocarbons produced by distillation of products from catalytic reforming of C ₆ -C ₈ feed and recycled to conserve hydrogen. It consists primarily of hydrogen. It may also contain various small amounts of carbon monoxide, carbon dioxide, nitrogen, and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-125-00-8	270-760-3	68477-80-5	H, K
Gases (petroleum), C ₆₋₈ catalytic reformer; Refinery gas (A complex combination of hydrocarbons produced by distillation of products from catalytic reforming of C ₆ -C ₈ feed. It consists of hydrocarbons having carbon numbers in the range of C ₁ through C ₃ and hydrogen.)	649-126-00-3	270-762-9	68477-81-6	H, K
Gases (petroleum), C ₆₋₈ catalytic reformer recycle, hydrogen-rich; Refinery gas	649-127-00-9	270-763-4	68477-82-7	H, K
Gases (petroleum), C ₂ -return stream; Refinery gas (A complex combination of hydrocarbons obtained by the extraction of hydrogen from a gas stream which consists primarily of hydrogen with small amounts of nitrogen, carbon monoxide, methane, ethane, and ethylene. It contains predominantly hydrocarbons such as methane, ethane, and ethylene with small amounts of hydrogen, nitrogen and carbon monoxide.)	649-128-00-4	270-766-0	68477-84-9	H, K
Gases (petroleum), dry sour, gas-concentration-unit-off; Refinery gas (The complex combination of dry gases from a gas concentration unit. It consists of hydrogen, hydrogen sulphide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .)	649-129-00-X	270-774-4	68477-92-9	H, K
Gases (petroleum), gas concentration reabsorber distillation; Refinery gas (A complex combination of hydrocarbons produced by distillation of products from combined gas streams in a gas concentration reabsorber. It consists predominantly of hydrogen, carbon monoxide, carbon dioxide, nitrogen, hydrogen sulphide and hydrocarbons having carbon numbers in the range of C ₁ through C ₃ .)	649-130-00-5	270-776-5	68477-93-0	H, K
Gases (petroleum), hydrogen absorber off; Refinery gas (A complex combination obtained by absorbing hydrogen from a hydrogen rich stream. It consists of hydrogen, carbon monoxide, nitrogen, and methane with small amounts of C ₂ hydrocarbons.)	649-131-00-0	270-779-1	68477-96-3	H, K
Gases (petroleum), hydrogen-rich; Refinery gas (A complex combination separated as a gas from hydrocarbon gases by chilling. It consists primarily of hydrogen with various small amounts of carbon monoxide, nitrogen, methane, and C ₂ hydrocarbons.)	649-132-00-6	270-780-7	68477-97-4	H, K

Substances	Index No	EC No	CAS No	Notes
<p>Gases (petroleum), hydrotreater blend oil recycle, hydrogen-nitrogen-rich; Refinery gas</p> <p>(A complex combination obtained from recycled hydrotreated blend oil. It consists primarily of hydrogen and nitrogen with various small amounts of carbon monoxide, carbon dioxide and hydrocarbons having carbon numbers predominantly in the range of C₁ through C₅.)</p>	649-133-00-1	270-781-2	68477-98-5	H, K
<p>Gases (petroleum), recycle, hydrogen-rich; Refinery gas</p> <p>(A complex combination obtained from recycled reactor gases. It consists primarily of hydrogen with various small amounts of carbon monoxide, carbon dioxide, nitrogen, hydrogen sulphide, and saturated aliphatic hydrocarbons having carbon numbers in the range of C₁ through C₅.)</p>	649-134-00-7	270-783-3	68478-00-2	H, K
<p>Gases (petroleum), reformer make-up, hydrogen-rich; Refinery gas</p> <p>(A complex combination obtained from the reformers. It consists primarily of hydrogen with various small amounts of carbon monoxide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C₁ through C₅.)</p>	649-135-00-2	270-784-9	68478-01-3	H, K
<p>Gases (petroleum), reforming hydrotreater; Refinery gas</p> <p>(A complex combination obtained from the reforming hydrotreating process. It consists primarily of hydrogen, methane, and ethane with various small amounts of hydrogen sulphide and aliphatic hydrocarbons having carbon numbers predominantly in the range C₃ through C₅.)</p>	649-136-00-8	270-785-4	68478-02-4	H, K
<p>Gases (petroleum), reforming hydrotreater, hydrogen-methane-rich; Refinery gas</p> <p>(A complex combination obtained from the reforming hydrotreating process. It consists primarily of hydrogen and methane with various small amounts of carbon monoxide, carbon dioxide, nitrogen and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C₂ through C₅.)</p>	649-137-00-3	270-787-5	68478-03-5	H, K
<p>Gases (petroleum), reforming hydrotreater make-up, hydrogen-rich; Refinery gas</p> <p>(A complex combination obtained from the reforming hydrotreating process. It consists primarily of hydrogen with various small amounts of carbon monoxide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C₁ through C₅.)</p>	649-138-00-9	270-788-0	68478-04-6	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), thermal cracking distillation; Refinery gas (A complex combination produced by distillation of products from a thermal cracking process. It consists of hydrogen, hydrogen sulphide, carbon monoxide, carbon dioxide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-139-00-4	270-789-6	68478-05-7	H, K
Tail gas (petroleum), catalytic cracker refractionation absorber; Refinery gas (A complex combination of hydrocarbons obtained from refractionation of products from a catalytic cracking process. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-140-00-X	270-805-1	68478-25-1	H, K
Tail gas (petroleum), catalytic reformed naphtha separator; Refinery gas (A complex combination of hydrocarbons obtained from the catalytic reforming of straight-run naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-141-00-5	270-807-2	68478-27-3	H, K
Tail gas (petroleum), catalytic reformed naphtha stabiliser; Refinery gas (A complex combination of hydrocarbons obtained from the stabilisation of catalytic reformed naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-142-00-0	270-808-8	68478-28-4	H, K
Tail gas (petroleum), cracked distillate hydrotreater separator; Refinery gas (A complex combination of hydrocarbons obtained by treating cracked distillates with hydrogen in the presence of a catalyst. It consists of hydrogen and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-143-00-6	270-809-3	68478-29-5	H, K
Tail gas (petroleum), hydrodesulphurised straight-run naphtha separator; Refinery gas (A complex combination of hydrocarbons obtained from hydrodesulphurisation of straight-run naphtha. It consists of hydrogen and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-144-00-1	270-810-9	68478-30-8	H, K
Gases (petroleum), catalytic reformed straight-run naphtha stabiliser overheads; Refinery gas (A complex combination of hydrocarbons obtained from the catalytic reforming of straight-run naphtha followed by fractionation of the total effluent. It consists of hydrogen, methane, ethane and propane.)	649-145-00-7	270-999-8	68513-14-4	H, K

Substances	Index No	EC No	CAS No	Notes
<p>Gases (petroleum), reformer effluent high-pressure flash drum off; Refinery gas</p> <p>(A complex combination produced by the high-pressure flashing of the effluent from the reforming reactor. It consists primarily of hydrogen with various small amounts of methane, ethane, and propane.)</p>	649-146-00-2	271-003-4	68513-18-8	H, K
<p>Gases (petroleum), reformer effluent low-pressure flash drum off; Refinery gas</p> <p>(A complex combination produced by low-pressure flashing of the effluent from the reforming reactor. It consists primarily of hydrogen with various small amounts of methane, ethane, and propane.)</p>	649-147-00-8	271-005-5	68513-19-9	H, K
<p>Gases (petroleum), oil refinery gas distillation off; Refinery gas</p> <p>(A complex combination separated by distillation of a gas stream containing hydrogen, carbon monoxide, carbon dioxide and hydrocarbons having carbon numbers in the range of C₁ through C₆ or obtained by cracking ethane and propane. It consists of hydrocarbons having carbon numbers predominantly in the range of C₁ through C₂, hydrogen, nitrogen, and carbon monoxide.)</p>	649-148-00-3	271-258-1	68527-15-1	H, K
<p>Gases (petroleum), benzene unit hydrotreater depentaniser overheads; Refinery gas</p> <p>(A complex combination produced by treating the feed from the benzene unit with hydrogen in the presence of a catalyst followed by depentanising. It consists primarily of hydrogen, ethane and propane with various small amounts of nitrogen, carbon monoxide, carbon dioxide and hydrocarbons having carbon numbers predominantly in the range of C₁ through C₆. It may contain trace amounts of benzene.)</p>	649-149-00-9	271-623-5	68602-82-4	H, K
<p>Gases (petroleum), secondary absorber off, fluidised catalytic cracker overheads fractionator; Refinery gas</p> <p>(A complex combination produced by the fractionation of the overhead products from the catalytic cracking process in the fluidised catalytic cracker. It consists of hydrogen, nitrogen, and hydrocarbons having carbon numbers predominantly in the range of C₁ through C₃.)</p>	649-150-00-4	271-625-6	68602-84-6	H, K
<p>Petroleum products, refinery gases; Refinery gas</p> <p>(A complex combination which consists primarily of hydrogen with various small amounts of methane, ethane and propane.)</p>	649-151-00-X	271-750-6	68607-11-4	H, K
<p>Gases (petroleum), hydrocracking low-pressure separator; Refinery gas</p> <p>(A complex combination obtained by the liquid-vapour separation of the hydrocracking process reactor effluent. It consists predominantly of hydrogen and saturated hydrocarbons having carbon numbers predominantly in the range of C₁ through C₃.)</p>	649-152-00-5	272-182-1	68783-06-2	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), refinery; Refinery gas (A complex combination obtained from various petroleum refining operations. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .)	649-153-00-0	272-338-9	68814-67-5	H, K
Gases (petroleum), platformer products separator off; Refinery gas (A complex combination obtained from the chemical reforming of naphthenes to aromatics. It consists of hydrogen and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₄ .)	649-154-00-6	272-343-6	68814-90-4	H, K
Gases (petroleum), hydrotreated sour kerosine depentaniser stabiliser off; Refinery gas (The complex combination obtained from the depentaniser stabilisation of hydrotreated kerosine. It consists primarily of hydrogen, methane, ethane, and propane with various small amounts of nitrogen, hydrogen sulphide, carbon monoxide and hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₅ .)	649-155-00-1	272-775-5	68911-58-0	H, K
Gases (petroleum), hydrotreated sour kerosine flash drum; Refinery gas (A complex combination obtained from the flash drum of the unit treating sour kerosine with hydrogen in the presence of a catalyst. It consists primarily of hydrogen and methane with various small amounts of nitrogen, carbon monoxide, and hydro-carbons having carbon numbers predominantly in the range of C ₂ through C ₅ .)	649-156-00-7	272-776-0	68911-59-1	H, K
Gases (petroleum), distillate unifier desulphurisation stripper off; Refinery gas (A complex combination stripped from the liquid product of the unifier desulphurisation process. It consists of hydrogen sulphide, methane, ethane, and propane.)	649-157-00-2	272-873-8	68919-01-7	H, K
Gases (petroleum), fluidised catalytic cracker fractionation off; Refinery gas (A complex combination produced by the fractionation of the overhead product of the fluidised catalytic cracking process. It consists of hydrogen, hydrogen sulphide, nitrogen, and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-158-00-8	272-874-3	68919-02-8	H, K
Gases (petroleum), fluidised catalytic cracker scrubbing secondary absorber off; Refinery gas (A complex combination produced by scrubbing the overhead gas from the fluidised catalytic cracker. It consists of hydrogen, nitrogen, methane, ethane and propane.)	649-159-00-3	272-875-9	68919-03-9	H, K
Gases (petroleum), heavy distillate hydrotreater desulphurisation stripper off; Refinery gas (A complex combination stripped from the liquid product of the heavy distillate hydrotreater desulphurisation process. It consists of hydrogen, hydrogen sulphide, and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-160-00-9	272-876-4	68919-04-0	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), platformer stabiliser off, light ends fractionation; Refinery gas (A complex combination obtained by the fractionation of the light ends of the platinum reactors of the platformer unit. It consists of hydrogen, methane, ethane and propane.)	649-161-00-4	272-880-6	68919-07-3	H, K
Gases (petroleum), preflash tower off, crude distillation; Refinery gas (A complex combination produced from the first tower used in the distillation of crude oil. It consists of nitrogen and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-162-00-X	272-881-1	68919-08-4	H, K
Gases (petroleum), tar stripper off; Refinery gas (A complex combination obtained by the fractionation of reduced crude oil. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-163-00-5	272-884-8	68919-11-9	H, K
Gases (petroleum), unifiner stripper off; Refinery gas (A combination of hydrogen and methane obtained by fractionation of the products from the unifiner unit.)	649-164-00-0	272-885-3	68919-12-0	H, K
Tail gas (petroleum), catalytic hydrodesulphurised naphtha separator; Refinery gas (A complex combination of hydrocarbons obtained from the hydrodesulphurisation of naphtha. It consists of hydrogen, methane, ethane, and propane.)	649-165-00-6	273-173-5	68952-79-4	H, K
Tail gas (petroleum), straight-run naphtha hydrodesulphuriser; Refinery gas (A complex combination obtained from the hydrodesulphurisation of straight-run naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-166-00-1	273-174-0	68952-80-7	H, K
Gases (petroleum), sponge absorber off, fluidised catalytic cracker and gas oil desulphuriser overhead fractionation; Refinery gas (A complex combination obtained by the fractionation of products from the fluidised catalytic cracker and gas oil desulphuriser. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-167-00-7	273-269-7	68955-33-9	H, K
Gases (petroleum), crude distillation and catalytic cracking; Refinery gas (A complex combination produced by crude distillation and catalytic cracking processes. It consists of hydrogen, hydrogen sulphide, nitrogen, carbon monoxide and paraffinic and olefinic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-168-00-2	273-563-5	68989-88-8	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), gas oil diethanolamine scrubber off; Refinery gas (A complex combination produced by desulphurisation of gas oils with diethanolamine. It consists predominantly of hydrogen sulphide, hydrogen and aliphatic hydrocarbons having carbon numbers in the range of C ₁ through C ₅ .)	649-169-00-8	295-397-2	92045-15-3	H, K
Gases (petroleum), gas oil hydrodesulphurisation effluent; Refinery gas (A complex combination obtained by separation of the liquid phase from the effluent from the hydrogenation reaction. It consists predominantly of hydrogen, hydrogen sulphide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .)	649-170-00-3	295-398-8	92045-16-4	H, K
Gases (petroleum), gas oil hydrodesulphurisation purge; Refinery gas (A complex combination of gases obtained from the reformer and from the purges from the hydrogenation reactor. It consists predominantly of hydrogen and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-171-00-9	295-399-3	92045-17-5	H, K
Gases (petroleum), hydrogenator effluent flash drum off; Refinery gas (A complex combination of gases obtained from flash of the effluents after the hydrogenation reaction. It consists predominantly of hydrogen and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-172-00-4	295-400-7	92045-18-6	H, K
Gases (petroleum), naphtha steam cracking high-pressure residual; Refinery gas (A complex combination obtained as a mixture of the non-condensable portions from the product of a naphtha steam cracking process as well as residual gases obtained during the preparation of subsequent products. It consists predominantly of hydrogen and paraffinic and olefinic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ with which natural gas may also be mixed.)	649-173-00-X	295-401-2	92045-19-7	H, K
Gases (petroleum), residue visbaking off; Refinery gas (A complex combination obtained from viscosity reduction of residues in a furnace. It consists predominantly of hydrogen sulphide and paraffinic and olefinic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-174-00-5	295-402-8	92045-20-0	H, K
Gases (petroleum), C _{3,4} ; Petroleum gas (A complex combination of hydrocarbons produced by distillation of products from the cracking of crude oil. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₄ , predominantly of propane and propylene, and boiling in the range of approximately - 51 °C to - 1 °C.)	649-177-00-1	268-629-5	68131-75-9	H, K

Substances	Index No	EC No	CAS No	Notes
<p>Tail gas (petroleum), catalytic cracked distillate and catalytic cracked naphtha fractionation absorber; Petroleum gas</p> <p>(The complex combination of hydrocarbons from the distillation of the products from catalytic cracked distillates and catalytic cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers in the range of C₁ through C₄.)</p>	649-178-00-7	269-617-2	68307-98-2	H, K
<p>Tail gas (petroleum), catalytic polymerisation naphtha fractionation stabiliser; Petroleum gas</p> <p>(A complex combination of hydrocarbons from the fractionation stabilisation products from polymerisation of naphtha. It consists predominantly of hydrocarbons having carbon numbers in the range of C₁ through C₄.)</p>	649-179-00-2	269-618-8	68307-99-3	H, K
<p>Tail gas (petroleum), catalytic reformed naphtha fractionation stabiliser, hydrogen sulphide-free; Petroleum gas</p> <p>(A complex combination of hydrocarbons obtained from fractionation stabilisation of catalytic reformed naphtha and from which hydrogen sulphide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C₁ through C₄.)</p>	649-180-00-8	269-619-3	68308-00-9	H, K
<p>Tail gas (petroleum), cracked distillate hydrotreater stripper; Petroleum gas</p> <p>(A complex combination of hydrocarbons obtained by treating thermal cracked distillates with hydrogen in the presence of a catalyst. It consists predominantly of saturated hydrocarbons having carbon numbers predominantly in the range of C₁ through C₆.)</p>	649-181-00-3	269-620-9	68308-01-0	H, K
<p>Tail gas (petroleum), straight-run distillate hydrodesulphuriser, hydrogen sulphide-free; Petroleum gas</p> <p>(A complex combination of hydrocarbons obtained from catalytic hydrodesulphurisation of straight run distillates and from which hydrogen sulphide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C₁ through C₄.)</p>	649-182-00-9	269-630-3	68308-10-1	H, K
<p>Tail gas (petroleum), gas oil catalytic cracking absorber; Petroleum gas</p> <p>(A complex combination of hydrocarbons obtained from the distillation of products from the catalytic cracking of gas oil. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C₁ through C₅.)</p>	649-183-00-4	269-623-5	68308-03-2	H, K
<p>Tail gas (petroleum), gas recovery plant; Petroleum gas</p> <p>(A complex combination of hydrocarbons from the distillation of products from miscellaneous hydrocarbon streams. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C₁ through C₅.)</p>	649-184-00-X	269-624-0	68308-04-3	H, K

Substances	Index No	EC No	CAS No	Notes
Tail gas (petroleum), gas recovery plant deethaniser; Petroleum gas (A complex combination of hydrocarbons from the distillation of products from miscellaneous hydrocarbon streams. It consists of hydrocarbon having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-185-00-5	269-625-6	68308-05-4	H, K
Tail gas (petroleum), hydrodesulphurised distillate and hydrodesulphurised naphtha fractionator, acid-free; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of hydrodesulphurised naphtha and distillate hydrocarbon streams and treated to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-186-00-0	269-626-1	68308-06-5	H, K
Tail gas (petroleum), hydrodesulphurised vacuum gas oil stripper, hydrogen sulphide-free; Petroleum gas (A complex combination of hydrocarbons obtained from stripping stabilisation of catalytic hydrodesulphurised vacuum gas oil and from which hydrogen sulphide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-187-00-6	269-627-7	68308-07-6	H, K
Tail gas (petroleum), light straight-run naphtha stabiliser, hydrogen sulphide-free; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation stabilisation of light straight-run naphtha and from which hydrogen sulphide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .)	649-188-00-1	269-629-8	68308-09-8	H, K
Tail gas (petroleum), propane-propylene alkylation feed prep deethaniser; Petroleum gas (A complex combination of hydrocarbons obtained from the distillation of the reaction products of propane with propylene. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-189-00-7	269-631-9	68308-11-2	H, K
Tail gas (petroleum), vacuum gas oil hydrodesulphuriser, hydrogen sulphide-free; Petroleum gas (A complex combination of hydrocarbons obtained from catalytic hydrodesulphurisation of vacuum gas oil and from which hydrogen sulphide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .)	649-190-00-2	269-632-4	68308-12-3	H, K
Gases (petroleum), catalytic cracked overheads; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from the catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₅ and boiling in the range of approximately - 48 °C to 32 °C.)	649-191-00-8	270-071-2	68409-99-4	H, K

Substances	Index No	EC No	CAS No	Notes
Alkanes, C ₁₋₂ ; Petroleum gas	649-193-00-9	270-651-5	68475-57-0	H, K
Alkanes, C ₂₋₃ ; Petroleum gas	649-194-00-4	270-652-0	68475-58-1	H, K
Alkanes, C ₃₋₄ ; Petroleum gas	649-195-00-X	270-653-6	68475-59-2	H, K
Alkanes, C ₄₋₅ ; Petroleum gas	649-196-00-5	270-654-1	68475-60-5	H, K
Fuel gases; Petroleum gas (A combination of light gases. It consists predominantly of hydrogen and/or low molecular weight hydrocarbons.)	649-197-00-0	270-667-2	68476-26-6	H, K
Fuel gases, crude oil of distillates; Petroleum gas (A complex combination of light gases produced by distillation of crude oil and by catalytic reforming of naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ and boiling in the range of approximately - 217 °C to - 12 °C.)	649-198-00-6	270-670-9	68476-29-9	H, K
Hydrocarbons, C ₃₋₄ ; Petroleum gas	649-199-00-1	270-681-9	68476-40-4	H, K
Hydrocarbons, C ₄₋₅ ; Petroleum gas	649-200-00-5	270-682-4	68476-42-6	H, K
Hydrocarbons, C ₂₋₄ , C ₃ -rich; Petroleum gas	649-201-00-0	270-689-2	68476-49-3	H, K
Petroleum gases, liquefied; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₇ and boiling in the range of approximately - 40 °C to 80 °C.)	649-202-00-6	270-704-2	68476-85-7	H, K, S
Petroleum gases, liquefied, sweetened; Petroleum gas (A complex combination of hydrocarbons obtained by subjecting liquefied petroleum gas mix to a sweetening process to convert mercaptans or to remove acidic impurities. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₇ and boiling in the range of approximately - 40 °C to 80 °C.)	649-203-00-1	270-705-8	68476-86-8	H, K, S
Gases (petroleum), C ₃₋₄ , isobutane-rich; Petroleum gas (A complex combination of hydrocarbons from the distillation of saturated and unsaturated hydrocarbons usually ranging in carbon numbers from C ₃ through C ₆ , predominantly butane and isobutane. It consists of saturated and unsaturated hydrocarbons having carbon numbers in the range of C ₃ through C ₄ , predominantly isobutane.)	649-204-00-7	270-724-1	68477-33-8	H, K
Distillates (petroleum), C ₃₋₆ , piperylene-rich; Petroleum gas (A complex combination of hydrocarbons from the distillation of saturated and unsaturated aliphatic hydrocarbons usually ranging in the carbon numbers C ₃ through C ₆ . It consists of saturated and unsaturated hydrocarbons having carbon numbers in the range of C ₃ through C ₆ , predominantly piperlenes.)	649-205-00-2	270-726-2	68477-35-0	H, K

Substances	Index No	EC No	CAS No	Notes
Gases (petroleum), butane splitter overheads; Petroleum gas (A complex combination of hydrocarbons obtained from the distillation of the butane stream. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₄ .)	649-206-00-8	270-750-3	68477-69-0	H, K
Gases (petroleum), C _{2,3} ; Petroleum gas (A complex combination of hydrocarbons produced by the distillation of products from a catalytic fractionation process. It contains predominantly ethane, ethylene, propane, and propylene.)	649-207-00-3	270-751-9	68477-70-3	H, K
Gases (petroleum), catalytic-cracked gas oil depropaniser bottoms, C ₄ -rich acid-free; Petroleum gas (A complex combination of hydrocarbons obtained from fractionation of catalytic cracked gas oil hydrocarbon stream and treated to remove hydrogen sulphide and other acidic components. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₅ , predominantly C ₄ .)	649-208-00-9	270-752-4	68477-71-4	H, K
Gases (petroleum), catalytic-cracked naphtha debutaniser bottoms, C _{3,5} -rich; Petroleum gas (A complex combination of hydrocarbons obtained from the stabilisation of catalytic cracked naphtha. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₅ .)	649-209-00-4	270-754-5	68477-72-5	H, K
Tail gas (petroleum), isomerised naphtha fractionation stabiliser; Petroleum gas (A complex combination of hydrocarbons obtained from the fractionation stabilisation products from isomerised naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .)	649-210-00-X	269-628-2	68308-08-7	H, K
Erionite	650-012-00-0		12510-42-8	
Asbestos	650-013-00-6		12001-29-5 12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5	