

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
001-002-00-4	aluminium lithium hydride	240-877-9	16853-85-3	F; R15 C; R35	F; C R: 15-35 S: (1/2-)/7/8-26-36/37/39-43-45		
005-006-00-7	dibutyltin hydrogen borate	401-040-5	75113-37-0	Muta. Cat. 3; R68 Repr. Cat. 2; R60-61 T; R48/25 Xn; R21/22 Xi; R41 R43 N; R50-53	T; N R: 60-61-21/22-41-43-48/25-68-50/53 S: 53-45-60-61		E
006-007-00-5	salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex	-	-	T+; R26/27/28 R32 N; R50-53	T+; N R: 26/27/28-32-50/53 S: (1/2-)/7-28-29-45-60-61		A
006-011-00-7	carbaryl (ISO); 1-naphthyl methylcarbamate	200-555-0	63-25-2	Carc. Cat. 3; R40 Xn; R20/22 N; R50	Xn; N R: 20/22-40-50 S: (2-)/36/37-46-61	N; R50: C ≥ 0,25 %	
006-015-00-9	diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	206-354-4	330-54-1	Carc. Cat. 3; R40 Xn; R22-48/22 N; R50-53	Xn; N R: 22-40-48/22-50/53 S: (2-)/13-36/37-46-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
006-045-00-2	methomyl (ISO); 1-(methylthio)ethylideneamino N-methylcarbamate	240-815-0	16752-77-5	T+; R28 N; R50-53	T+; N R: 28-50/53 S: (1/2-)/28-36/37-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
006-076-00-1	mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt	-	8018-01-7	Repr. Cat. 3; R63 R43 N; R50	Xn; N R: 43-63-50 S: (2-)/36/37-46-61	N; R50: C ≥ 2,5 %	
006-077-00-7	maneb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric)	235-654-8	12427-38-2	Repr. Cat. 3; R63 Xn; R20 Xi; R36 R43 N; R50-53	Xn; N R: 20-36-43-63-50/53 S: (2-)/36/37-46-60-61	N; R50-53: C ≥ 2,5 % N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	
006-084-00-5	carbosulfan (ISO); 2,3-dihydro-2,2-dimethyl-7-benzofuryl [(dibutylamino)thio]methylcarbamate	259-565-9	55285-14-8	T+; R26 T; R25 R43 N; R50-53	T+; N R: 25-26-43-50/53 S: (1/2-)/28-36/37-38-45-63-60-61		
006-087-00-1	furathiocarb (ISO); 2,3-dihydro-2,2-dimethyl-7-benzofuryl 2,4-dimethyl-6-oxa-5-oxo-3-thia-2,4-diazadecanoate	265-974-3	65907-30-4	T+; R26 T; R25 Xn; R48/22 Xi; R36/38 R43	T+; N R: 25-26-36/38-43-48/22-50/53 S: (1/2-)/28-36/37-38-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				N; R50-53			
006-088-00-7	benfuracarb (ISO); ethyl <i>N</i> -[2,3-dihydro-2,2-dimethylbenzofuran-7-ylloxycarbonyl(methyl)aminothio]- <i>N</i> -isopropyl- β-alaninate	-	82560-54-1	Repr. Cat. 3; R62 T; R23 Xn; R22 N; R50-53	T; N R: 22-23-62-50/53 S: (1/2-)36/37-45-60-61		
007-002-00-0	nitrogen dioxide; [1] dinitrogen tetraoxide [2]	233-272-6 [1] 234-126-4 [2]	10102-44-0 [1] 10544-72-6 [2]	O; R8 T+; R26 C; R34	O; T+ R: 8-26-34 S: (1/2-)9-26-28-36/37/39-45	T+; R26: C ≥ 10 % T; R23: 1 % ≤ C < 10 % Xn; R20: 0,1 % ≤ C < 1 %	5
007-007-00-8	ethyl nitrate	210-903-3	625-58-1	E; R3	E R: 3 S: (2-)23-24/25		
009-001-00-0	fluorine	231-954-8	7782-41-4	O; R8 T+; R26 C; R35	O; T+; C R: 8-26-35 S: (1/2-)9-26-28-36/37/39-45		
013-002-00-1	aluminium powder (stabilised)	231-072-3	7429-90-5	F; R11-15	F R: 11-15 S: (2-)7/8-43		T
015-003-00-2	calcium phosphide; tricalcium diphosphide	215-142-0	1305-99-3	F; R15 T+; R28 R29 N; R50	F; T+; N R: 15/29-28-50 S: (1/2-)22-28-36/37-43-45-61	N; R50: C ≥ 0,25 %	
015-004-00-8	aluminium phosphide	244-088-0	20859-73-8	F; R15 T+; R28 R29 R32 N; R50	F; T+; N R: 15/29-28-32-50 S: (1/2-)3/9/14-28-30-36/37-43-45-61	N; R50: C ≥ 0,25 %	
015-005-00-3	magnesium phosphide; trimagnesium diphosphide	235-023-7	12057-74-8	F; R15 T+; R28 R29 N; R50	F; T+; N R: 15/29-28-50 S: (1/2-)22-28-43-45-61	N; R50: C ≥ 0,25 %	
015-006-00-9	trizinc diphosphide; zinc phosphide	215-244-5	1314-84-7	F; R15 T+; R28 R29 R32 N; R50-53	F; T+; N R: 15/29-28-32-50/53 S: (1/2-)28-30-36/37-43-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	T
015-019-00-X	dichlorvos (ISO); 2,2-dichlorovinyl dimethyl phosphate	200-547-7	62-73-7	T+; R26 T; R24/25 R43 N; R50	T+; N R: 24/25-26-43-50 S: (1/2-)28-36/37-45-61	N; R50: C ≥ 0,025 %	
015-041-00-X	malathion (ISO);	204-497-7	121-75-5	Xn; R22	Xn; N	N; R50-53: C ≥ 0,025 %	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	1,2-bis(ethoxycarbonyl)ethyl <i>O,O</i> -dimethyl phosphorodithioate; [containing ≤ 0.03 % isomalathion]			R43 N; R50-53	R: 22-43-50/53 S: (2-)-24-37-46-60-61	N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
015-048-00-8	fenthion (ISO); <i>O,O</i> -dimethyl- <i>O</i> -(4-methylthion- <i>m</i> -tolyl) phosphorothioate	200-231-9	55-38-9	Muta. Cat. 3; R68 T; R23-48/25 Xn; R21/22 N; R50-53	T; N R: 21/22-23-48/25-68-50/53 S: (1/2-)-36/37-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
015-056-00-1	azinphos-ethyl (ISO); <i>O,O</i> -diethyl 4-oxobenzotriazin-3-ylmethyl phosphorodithioate	220-147-6	2642-71-9	T+; R28 T; R24 N; R50-53	T+; N R: 24-28-50/53 S: (1/2-)-28-36/37-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
015-067-00-1	phosalone (ISO); <i>S</i> -(6-chloro-2-oxobenzoxazolin-3-ylmethyl) <i>O,O</i> -diethyl phosphorodithioate	218-996-2	2310-17-0	T; R25 Xn; R20/21 R43 N; R50-53	T; N R: 20/21-25-43-50/53 S: (1/2-)-36/37-45-60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
015-100-00-X	phoxim (ISO); α-(diethoxyphosphinothiolyimino) phenylacetoneitrile	238-887-3	14816-18-3	Repr. Cat. 3; R62 Xn; R22 R43 N; R50-53	Xn; N R: 22-43-62-50/53 S: (2-)-36/37-46-60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
015-102-00-0	tris(2-chloroethyl)phosphate	204-118-5	115-96-8	Carc. Cat. 3; R40 Repr. Cat. 2; R60 Xn; R22 N; R51-53	T; N R: 60-22-40-51/53 S: 53-45-61		E
015-114-00-6	chlormephos (ISO); <i>S</i> -chloromethyl <i>O,O</i> -diethyl phosphorodithioate	246-538-1	24934-91-6	T+; R27/28 N; R50-53	T+; N R: 27/28-50/53 S: (1/2-)-27-28-36/37-45-60-61	N; R50-53: C ≥ 2,5 % N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	
015-115-00-1	chlorthiophos (ISO); [isomeric reaction mass in which <i>O</i> -2,5-dichlorophenyl-4-methylthiophenyl <i>O,O</i> -diethyl phosphorothioate predominates]	244-663-6	21923-23-9	T+; R28 T; R24 N; R50-53	T+; N R: 24-28-50/53 S: (1/2-)-28-36/37-45-60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
015-140-00-8	triazophos (ISO); <i>O,O</i> -diethyl- <i>O</i> -1-phenyl-1 <i>H</i> -1,2,4-triazol-3-yl phosphorothioate	245-986-5	24017-47-8	T; R23/25 Xn; R21 N; R50-53	T; N R: 21-23/25-50/53 S: (1/2-)-36/37-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
015-155-00-X	glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate	278-636-5	77182-82-2	Repr. Cat. 2; R60 Repr. Cat. 3; R63 Xn; R20/21/22-48/20/22	T R: 60-20/21/22-48/20/22-63 S: 53-45		E
016-009-00-8	disodium sulfide; sodium sulfide	215-211-5	1313-82-2	T; R24 Xn; R22 C; R34 R31	T; C; N R: 22-24-31-34-50 S: (1/2-)-26-36/37/39-45-61		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				N; R50			
016-084-00-7	prosulfuron (ISO); 1-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-3-[2-(3,3,3-trifluoropropyl)phenylsulfonyl]urea	-	94125-34-5	Xn; R22 N; R50-53	Xn; N R: 22-50/53 S: (2-)-60-61	N; R50-53: $C \geq 0,25 \%$ N; R51-53: $0,025 \% \leq C < 0,25 \%$ R52-53: $0,0025 \% \leq C < 0,025 \%$	
017-001-00-7	chlorine	231-959-5	7782-50-5	T; R23 Xi; R36/37/38 N; R50	T; N R: 23-36/37/38-50 S: (1/2-)-9-45-61	N; R50: $C \geq 0,25 \%$	
017-009-00-0	ammonium perchlorate; [containing $\geq 80 \%$ of 0-30 μm particles]	232-235-1	7790-98-9	E; R3 O; R9	E R: 3-9 S: (2-)-14-16-36/37		T
017-012-00-7	calcium hypochlorite	231-908-7	7778-54-3	O; R8 \otimes C; R34 Xn; R22 R31 N; R50	O; C; N R: 8-22-31-34-50 S: (1/2-)-26-36/37/39-45-61	C; R34: $C \geq 10 \%$ Xi; R37/38-41: $3 \% \leq C < 10 \%$ Xi; R36: $0,5 \% \leq C < 3 \%$ N; R50: $C \geq 2,5 \%$	
017-026-00-3	chlorine dioxide	233-162-8	10049-04-4	O; R8 R6 T+; R26 C; R34 N; R50	O; T+; N R: 6-8-26-34-50 S: (1/2-)-23-26-28-36/37/39-38-45-61	N; R50: $C \geq 2,5 \%$	5
017-026-01-0	chlorine dioxide ... %	233-162-8	10049-04-4	T; R25 C; R34 N; R50	T; N R: 25-34-50 S: (1/2-)-23-26-28-36/37/39-45-61	C; R34: $C \geq 10 \%$ Xi; R37/38: $3 \% \leq C < 10 \%$ Xi; R36: $0,3 \% \leq C < 10 \%$ N; R50: $C \geq 2,5 \%$	B
024-004-00-7	sodium dichromate	234-190-3	10588-01-9	O; R8 Carc. Cat. 2; R45 Muta. Cat. 2; R46 Repr. Cat. 2; R60-61 T+; R26 T; R25-48/23 Xn; R21 C; R34 R42/43 N; R50-53	O; T+; N R: 45-46-60-61-8-21-25-26-34-42/43-48/23-50/53 S: 53-45-60-61	C; R34: $C \geq 25 \%$ Xi; R36/37/38: $5 \% \leq C < 10 \%$ R42/43: $C \geq 0,2 \%$	E
027-002-00-4	cobalt oxide	215-154-6	1307-96-6	Xn; R22 R43 N; R50-53	Xn; N R: 22-43-50/53 S: (2-)-24-37-60-61	N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	
027-003-00-X	cobalt sulfide	215-273-3	1317-42-6	R43 N; R50-53	Xi; N R: 43-50/53 S: (2-)-24-37-60-61	N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
027-004-00-5	cobalt dichloride	231-589-4	7646-79-9	Carc. Cat. 2; R49 Muta. Cat. 3; R68 Repr. Cat. 2; R60 Xn; R22 R42/43 N; R50-53	T; N R: 49-60-22-42/43-68-50/53 S: 53-45-60-61	Carc. Cat. 2; R49: $C \geq 0,01 \%$ N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	E 1
027-005-00-0	cobalt sulfate	233-334-2	10124-43-3	Carc. Cat. 2; R49 Muta. Cat. 3; R68 Repr. Cat. 2; R60 Xn; R22 R42/43 N; R50-53	T; N R: 49-60-22-42/43-68-50/53 S: 53-45-60-61	Carc. Cat. 2; R49: $C \geq 0,01 \%$ N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	E 1
028-002-00-7	nickel	231-111-4	7440-02-0	Carc. Cat. 3; R40 T; R48/23 R43	T R: 40-43-48/23 S: (2-)36/37/39-45		S 7
028-003-00-2	nickel monoxide; [1] nickel oxide; [2] bunsenite [3]	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]	Carc. Cat. 1; R49 T; R48/23 R43 R53	T R: 49-43-48/23-53 S: 53-45-61		E
028-004-00-8	nickel dioxide	234-823-3	12035-36-8	Carc. Cat. 1; R49 T; R48/23 R43 R53	T R: 49-43-48/23-53 S: 53-45-61		E
028-005-00-3	dinickel trioxide	215-217-8	1314-06-3	Carc. Cat. 1; R49 T; R48/23 R43 R53	T R: 49-43-48/23-53 S: 53-45-61		E
028-006-00-9	nickel (II) sulfide; [1] nickel sulfide; [2] millerite [3]	240-841-2 [1] 234-349-7 [2] - [3]	16812-54-7 [1] 11113-75-0 [2] 1314-04-1 [3]	Carc. Cat. 1; R49 Muta. Cat. 3; R68 T; R48/23 R43 N; R50-53	T; N R: 49-43-48/23-68-50/53 S: 53-45-60-61		E
028-007-00-4	trinickel disulfide; nickel subsulfide; [1] heazlewoodite [2]	234-829-6 [1] - [2]	12035-72-2 [1] 12035-71-1 [2]	Carc. Cat. 1; R49 Muta. Cat. 3; R68 T; R48/23 R43 N; R50-53	T; N R: 49-43-48/23-68-50/53 S: 53-45-60-61		E
028-008-00-X	nickel dihydroxide; [1] nickel hydroxide [2]	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	Carc. Cat. 1; R49 Repr. Cat. 2; R61 Muta. Cat. 3; R68 T; R48/23	T; N R: 49-61-20/22-38-42/43-48/23-68-50/53 S: 53-45-60-61		E

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				Xn; R20/22 Xi; R38 R42/43 N; R50-53			
028-009-00-5	nickel sulfate	232-104-9	7786-81-4	Carc. Cat. 1; R49 Muta. Cat. 3; R68 Repr. Cat. 2; R61 T; R48/23 Xn; R20/22 Xi; R38 R42/43 N; R50-53	T; N R: 49-61-20/22-38-42/43-48/23-68-50/53 S: 53-45-60-61	T; R48/23: C ≥ 1 % Xn; R48/20: 0,1 % ≤ C < 1 % Xi; R38: C ≥ 20 % R43: C ≥ 0,01 % N; R50-53: C ≥ 25 % N; R51-53: 2,5 % ≤ C < 25 % R52-53: 0,25 % ≤ C < 2,5 %	E
028-010-00-0	nickel carbonate; basic nickel carbonate; carbonic acid, nickel (2+) salt; [1] carbonic acid, nickel salt; [2] [μ-[carbonato(2-)-O:O']] dihydroxy trinickel; [3] [carbonato(2-)] tetrahydroxytrinickel [4]	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]	Carc. Cat. 1; R49 Muta. Cat. 3; R68 Repr. Cat. 2; R61 T; R48/23 Xn; R20/22 Xi; R38 R42/43 N; R50-53	T; N R: 49-61-20/22-38-42/43-48/23-68-50/53 S: 53-45-60-61		E
029-013-00-X	trisodium(2-(α-(3-(4-chloro-6-(2-(2-(vinylsulfonyl)ethoxy)ethylamino)-1,3,5-triazin-2-ylamino)-2-oxido-5-sulfonatophenylazo)benzylidenehydrazino)-4-sulfonatobenzoato)copper(II)	407-580-8	130201-51-3	Xi; R41	Xi R: 41 S: (2-)26-39		
033-005-00-1	arsenic acid and its salts with the exception of those specified elsewhere in this Annex	-	-	Carc. Cat. 1; R45 T; R23/25 N; R50-53	T; N R: 45-23/25-50/53 S: 53-45-60-61		AE
034-002-00-8	selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex	-	-	T; R23/25 R33 N; R50-53	T; N R: 23/25-33-50/53 S: (1/2-)20/21-28-45-60-61		A
042-001-00-9	molybdenum trioxide	215-204-7	1313-27-5	Carc. Cat. 3; R40 Xi; R36/37	Xn R: 36/37-40 S: (2-)22-36/37		
042-002-00-4	tetrakis(dimethylditetradecylamm onium) hexa-μ-oxotetra-μ3-oxodi-μ5-oxotetradecaooctamolybdate(4-)	404-760-8	117342-25-3	T; R23 Xi; R41	T R: 23-41 S: (1/2-)26-36/37/39-45		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
047-001-00-2	silver nitrate	231-853-9	7761-88-8	O; R8 C; R34 N; R50-53	O; C; N R: 8-34-50/53 S: (1/2-)-26-36/37/39-45-60-61		
050-002-00-0	cyhexatin (ISO); hydroxytricyclohexylstannane; tri(cyclohexyl)tin hydroxide	236-049-1	13121-70-5	Xn; R20/21/22 N; R50-53	Xn; N R: 20/21/22-50/53 S: (2-)-13-60-61	N; R50-53: $C \geq 0,025 \%$ N; R51-53: $0,0025 \% \leq C < 0,025 \%$ R52-53: $0,00025 \% \leq C < 0,0025 \%$	
050-003-00-6	fentin acetate (ISO); triphenyltin acetate	212-984-0	900-95-8	Carc. Cat. 3; R40 Repr. Cat. 3; R63 T+; R26 T; R24/25-48/23 Xi; R37/38-41 N; R50-53	T+; N R: 24/25-26-37/38-40-41- 48/23-63-50/53 S: (1/2-)-26-28-36/37/39-45-60- 61	Xi; R37: $C \geq 20 \%$ N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	
050-004-00-1	fentin hydroxide (ISO); triphenyltin hydroxide	200-990-6	76-87-9	Carc. Cat. 3; R40 Repr. Cat. 3; R63 T+; R26 T; R24/25-48/23 Xi; R37/38-41 N; R50-53	T+; N R: 24/25-26-37/38-40-41- 48/23-63-50/53 S: (1/2-)-26-28-36/37/39-45-60- 61	Xi; R37: $C \geq 20 \%$ N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	
050-008-00-3	tributyltin compounds, with the exception of those specified elsewhere in this Annex	-	-	T; R25-48/23/25 Xn; R21 Xi; R36/38 N; R50-53	T; N R: 21-25-36/38-48/23/25-50/53 S: (1/2-)-36/37/39-45-60-61	T; R25: $C \geq 2,5 \%$ Xn; R22: $0,25 \% \leq C < 2,5 \%$ Xn; R21: $C \geq 1 \%$ T; R48/23/25: $C \geq 1 \%$ Xn; R48/20/22: $0,25 \% \leq C < 1 \%$ Xi; R36/38: $C \geq 1 \%$ N; R50-53: $C \geq 2,5 \%$ N; R51-53: $0,25 \% \leq C < 2,5 \%$ R52-53: $0,025 \% \leq C < 0,25 \%$	A 1
050-011-00-X	triphenyltin compounds, with the exception of those specified elsewhere in this Annex	-	-	T; R23/24/25 N; R50-53	T; N R: 23/24/25-50/53 S: (1/2-)-26-27-28-45-60-61	T; R23/24/25: $C \geq 1 \%$ Xn; R20/21/22: $0,25 \% \leq C < 1 \%$ N; R50-53: $C \geq 0,25 \%$ N; R51-53: $0,025 \% \leq C < 0,25 \%$ R52-53: $0,0025 \% \leq C < 0,025 \%$	A 1
050-018-00-8	tin(II) methanesulphonate	401-640-7	53408-94-9	C; R34 Xn; R22 R43 N; R51-53	C; N R: 22-34-43-51/53 S: (1/2-)-22-26-36/37/39-45-61		
053-003-00-4	iodoxybenzene	-	696-33-3	E; R2	E R: 2 S: (2-)-35		
053-004-00-X	calcium iodoxybenzoate	-	-	E; R2	E		C

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
					R: 2 S: (2-)35		
080-001-00-0	mercury	231-106-7	7439-97-6	Repr. Cat. 2; R61 T+; R26 T; R48/23 N; R50-53	T+; N R: 61-26-48/23-50/53 S: 53-45-60-61		E
080-006-00-8	dimercury dicyanide oxide; mercuric oxycyanide	215-629-8	1335-31-5	E; R2 T; R23/24/25 R33 N; R50-53	E; T; N R: 2-23/24/25-33-50/53 S: (1/2-)28-36/37-45-60-61		
080-010-00-X	mercury dichloride; mercuric chloride	231-299-8	7487-94-7	Muta. Cat. 3; R68 Repr. Cat. 3; R62 T+; R28 T; R48/24/25 C; R34 N; R50-53	T+; N R: 28-34-48/24/25-62-68-50/53 S: (1/2-)26-36/37/39-45-60-61		
082-004-00-2	lead chromate	231-846-0	7758-97-6	Carc. Cat. 2; R45 Repr. Cat. 1; R61 Repr. Cat. 3; R62 R33 N; R50-53	T; N R: 45-61-33-62-50/53 S: 53-45-60-61		1
082-009-00-X	lead sulfochromate yellow; C.I. Pigment Yellow 34; [This substance is identified in the Colour Index by Colour Index Constitution Number, C.I. 77603.]	215-693-7	1344-37-2	Carc. Cat. 2; R45 Repr. Cat. 1; R61 Repr. Cat. 3; R62 R33 N; R50-53	T; N R: 45-61-33-62-50/53 S: 53-45-60-61		1
082-010-00-5	lead chromate molybdate sulfate red; C.I. Pigment Red 104; [This substance is identified in the Colour Index by Colour Index Constitution Number, C.I. 77605.]	235-759-9	12656-85-8	Carc. Cat. 2; R45 Repr. Cat. 1; R61 Repr. Cat. 3; R62 R33 N; R50-53	T; N R: 45-61-33-62-50/53 S: 53-45-60-61		1
092-002-00-3	uranium compounds with the exception of those specified elsewhere in this Annex	-	-	T+; R26/28 R33 N; R51-53	T+; N R: 26/28-33-51/53 S: (1/2-)20/21-45-61		A
601-007-00-7	hexane (containing < 5 % <i>n</i> - hexane (203-777-6)); 2-methylpentane; [1] 3-methylpentane; [2] 2,2-dimethylbutane; [3] 2,3-dimethylbutane [4]	203-523-4 [1] 202-481-4 [2] 200-906-8 [3] 201-193-6 [4]	107-83-5 [1] 96-14-0 [2] 75-83-2 [3] 79-29-8 [4]	F; R11 Xn; R65 Xi; R38 R67 N; R51-53	F; Xn; N R: 11-38-65-67-51/53 S: (2-)9-16-29-33-61-62		C
601-008-00-2	heptane;	205-563-8 [1]	142-82-5 [1]	F; R11	F; Xn; N		C

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	<i>n</i> -heptane; [1] 2,4-dimethylpentane; [2] 2,2,3-trimethylbutane; [3] 3,3-dimethylpentane; [4] 2,3-dimethylpentane; [5] 3-methylhexane; [6] 2,2-dimethylpentane; [7] 2-methylhexane; [8] 3-ethylpentane; [9] isooheptane; [10]	203-548-0 [2] 207-346-3 [3] 209-230-8 [4] 209-280-0 [5] 209-643-3 [6] 209-680-5 [7] 209-730-6 [8] 210-529-0 [9] 250-610-8 [10]	108-08-7 [2] 464-06-2 [3] 562-49-2 [4] 565-59-3 [5] 589-34-4 [6] 590-35-2 [7] 591-76-4 [8] 617-78-7 [9] 31394-54-4 [10]	Xn; R65 Xi; R38 R67 N; R50-53	R: 11-38-65-67-50/53 S: (2-)9-16-29-33-60-61-62		
601-009-00-8	octane; <i>n</i> -octane; [1] 2,2,4-trimethylpentane; [2] 2,3,3-trimethylpentane; [3] 3,3-dimethylhexane; [4] 2,2,3-trimethylpentane; [5] 2,3,4-trimethylpentane; [6] 3,4-dimethylhexane; [7] 2,3-dimethylhexane; [8] 2,4-dimethylhexane; [9] 4-methylheptane; [10] 3-methylheptane; [11] 2,2-dimethylhexane; [12] 2,5-dimethylhexane; [13] 2-methylheptane; [14] 2,2,3,3-tetramethylbutane; [15] 3-ethyl-2-methylpentane; [16] 3-ethylhexane; [17] 3-ethyl-3-methylpentane; [18] isooctane; [19]	203-892-1 [1] 208-759-1 [2] 209-207-2 [3] 209-243-9 [4] 209-266-4 [5] 209-292-6 [6] 209-504-7 [7] 209-547-1 [8] 209-649-6 [9] 209-650-1 [10] 209-660-6 [11] 209-689-4 [12] 209-745-8 [13] 209-747-9 [14] 209-855-6 [15] 210-187-2 [16] 210-621-0 [17] 213-923-0 [18] 247-861-0 [19]	111-65-9 [1] 540-84-1 [2] 560-21-4 [3] 563-16-6 [4] 564-02-3 [5] 565-75-3 [6] 583-48-2 [7] 584-94-1 [8] 589-43-5 [9] 589-53-7 [10] 589-81-1 [11] 590-73-8 [12] 592-13-2 [13] 592-27-8 [14] 594-82-1 [15] 609-26-7 [16] 619-99-8 [17] 1067-08-9 [18] 26635-64-3 [19]	F; R11 Xn; R65 Xi; R38 R67 N; R50-53	F; Xn; N R: 11-38-65-67-50/53 S: (2-)9-16-29-33-60-61-62		C
601-033-00-9	benz[<i>a</i>]anthracene	200-280-6	56-55-3	Carc. Cat. 2; R45 N; R50-53	T; N R: 45-50/53 S: 53-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
601-041-00-2	dibenz[<i>a,h</i>]anthracene	200-181-8	53-70-3	Carc. Cat. 2; R45 N; R50-53	T; N R: 45-50/53 S: 53-45-60-61	Carc. Cat. 2; R45: C ≥ 0,01 % N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
601-065-00-3	reaction mass of: (1' <i>α</i> ,3' <i>α</i> ,6' <i>α</i>)-2,2,3',7',7'-pentamethylspiro(1,3-dioxane-5,2'-norcarane); (1' <i>α</i> ,3' <i>β</i> ,6' <i>α</i>)-2,2,3',7',7'-pentamethylspiro(1,3-dioxane-5,2'-norcarane)	416-930-9	-	Xi; R38 N; R51-53	Xi; N R: 38-51/53 S: (2-)36/37-61		
602-007-00-X	bromoform; tribromomethane	200-854-6	75-25-2	T; R23 Xn; R22 Xi; R36/38 N; R51-53	T; N R: 22-23-36/38-51/53 S: (1/2-)28-45-63-61		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
602-030-00-5	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]	R10 T; R24/25 Xn; R20-65 Xi; R36/37/38 R43 N; R50-53	T; N R: 10-20-24/25-36/37/38-43-65-50/53 S: (1/2-)36/37-45-60-61		C D
602-050-00-4	isodrin; (1 α ,4 α ,4 β ,5 β ,8 β ,8 β)- 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-1,4:5,8- dimethanonaphthalene	207-366-2	465-73-6	T+; R26/27/28 N; R50-53	T+; N R: 26/27/28-50/53 S: (1/2-)13-28-36/37-45-60-61	N; R50-53: C \geq 0,25 % N; R51-53: 0,025 % \leq C < 0,25 % R52-53: 0,0025 % \leq C < 0,025 %	
602-052-00-5	endosulfan (ISO); 1,2,3,4,7,7-hexachloro-8,9,10- trinorborn-2-en-5,6- ylenedimethylene sulfite; 1,4,5,6,7,7-hexachloro-8,9,10- trinorborn-5-en-2,3- ylenedimethylene sulfite	204-079-4	115-29-7	T+; R26/28 Xn; R21 N; R50-53	T+; N R: 21-26/28-50/53 S: (1/2-)28-36/37-45-60-61-63		
602-054-00-6	3-iodopropene; allyl iodide	209-130-4	556-56-9	F; R11 C; R34	F; C R: 11-34 S: (1/2-)7-16-26-45		
602-076-00-6	2,3,4-trichlorobut-1-ene	219-397-9	2431-50-7	Carc. Cat. 3; R40 T; R23 Xn; R22 Xi; R36/37/38 N; R50-53	T; N R: 22-23-36/37/38-40-50/53 S: (1/2-)36/37-45-60-61	Carc. Cat. 3; R40: C \geq 0,1 %	
602-080-00-8	alkanes, C ₁₀₋₁₃ , chloro; chlorinated paraffins, C ₁₀₋₁₃	287-476-5	85535-84-8	Carc. Cat. 3; R40 R66 N; R50-53	Xn; N R: 40-66-50/53 S: (2-)24-36/37-46-60-61		
603-005-00-1	2-methylpropan-2-ol; <i>tert</i> -butyl alcohol	200-889-7	75-65-0	F; R11 Xn; R20 Xi; R36/37	F; Xn R: 11-20-36/37 S: (2-)9-16-46		
603-018-00-2	furfuryl alcohol	202-626-1	98-00-0	Carc. Cat. 3; R40 T; R23 Xn; R21/22-48/20 Xi; R36/37	T R: 21/22-23-36/37-40-48/20 S: (1/2-)36/37-45-63		
603-023-00-X	ethylene oxide; oxirane	200-849-9	75-21-8	F+; R12 R6 Carc. Cat. 2; R45 Muta. Cat. 2; R46 T; R23 Xi; R36/37/38	F+; T R: 45-46-6-12-23-36/37/38 S: 53-45		E
603-029-00-2	bis(2-chloroethyl) ether	203-870-1	111-44-4	Carc. Cat. 3; R40	T+		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				T+; R26/27/28	R: 26/27/28-40 S: (1/2-)7/9-27-28-36/37-45		
603-032-00-9	ethylene dinitrate; ethylene glycol dinitrate	211-063-0	628-96-6	E; R3 T+; R26/27/28 R33	E; T+ R: 3-26/27/28-33 S: (1/2-)27/28-33-35-36/37-45		
603-037-00-6	cellulose nitrate; nitrocellulose	-	-	E; R3	E R: 3 S: (2-)35		T
603-046-00-5	bis(chloromethyl) ether; oxybis(chloromethane)	208-832-8	542-88-1	F; R11 Carc. Cat. 1; R45 T+; R26 T; R24 Xn; R22	F; T+ R: 45-11-22-24-26 S: 53-45	Carc. Cat. 1; R45: C ≥ 0,001 %	E
603-064-00-3	1-methoxy-2-propanol; monopropylene glycol methyl ether	203-539-1	107-98-2	R10 R67	R: 10-67 S: (2-)		
603-066-00-4	1,2-epoxy-4-epoxyethylcyclohexane; 4-vinylcyclohexene diepoxide	203-437-7	106-87-6	Carc. Cat. 3; R40 T; R23/24/25	T R: 23/24/25-40 S: (1/2-)36/37-45-63	T; R23/24/25: C ≥ 1 % Xn; R20/21/22: 0,1 % ≤ C < 1 %	
603-085-00-8	bronopol (INN); 2-bromo-2-nitropropane-1,3-diol	200-143-0	52-51-7	Xn; R21/22 Xi; R37/38-41 N; R50	Xn; N R: 21/22-37/38-41-50 S: (2-)26-36/37/39-61	N; R50: C ≥ 2,5 %	
603-127-00-5	butan-2-ol; [1] (S)-butan-2-ol; [2] (R)-butan-2-ol; [3] (±)-butan-2-ol [4]	201-158-5 [1] 224-168-1 [2] 238-967-8 [3] 240-029-8 [4]	78-92-2 [1] 4221-99-2 [2] 14898-79-4 [3] 15892-23-6 [4]	R10 Xi; R36/37 R67	Xi R: 10-36/37-67 S: (2-)7/9-13-24/25-26-46		C
604-005-00-4	1,4-dihydroxybenzene; hydroquinone; quinol	204-617-8	123-31-9	Carc. Cat. 3; R40 Muta. Cat. 3; R68 Xn; R22 Xi; R41 R43 N; R50	Xn; N R: 22-40-41-43-68-50 S: (2-)26-36/37/39-61	N; R50: C ≥ 2,5 %	
604-030-00-0	bisphenol A; 4,4'-isopropylidenediphenol	201-245-8	80-05-7	Repr. Cat. 3; R62 Xi; R37-41 R43 R52	Xn R: 37-41-43-62-52 S: (2-)26-36/37-39-46-61		
604-055-00-7	2,2'-((3,3',5,5'-tetramethyl-(1,1'-biphenyl)-4,4'-diyl)-bis(oxymethylene))-bis-oxirane	413-900-7	85954-11-6	Carc. Cat. 3; R40 R43	Xn R: 40-43 S: (2-)22-36/37		
605-004-00-1	2,4,6-trimethyl-1,3,5-trioxane; paraldehyde	204-639-8	123-63-7	R10	R: 10 S: (2-)29		
605-005-00-7	2,4,6,8-tetramethyl-1,3,5,7-	203-600-2	108-62-3	F; R11	F; Xn		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	tetraoxacyclooctane; metaldehyde			Xn; R22	R: 11-22 S: (2-)-13-16-25-46		
605-010-00-4	2-furaldehyde	202-627-7	98-01-1	Carc. Cat. 3; R40 T; R23/25 Xn; R21 Xi; R36/37/38	T R: 21-23/25-36/37/38-40 S: (1/2-)-26-36/37-45		
606-013-00-3	<i>p</i> -benzoquinone; quinone	203-405-2	106-51-4	T; R23/25 Xi; R36/37/38 N; R50	T; N R: 23/25-36/37/38-50 S: (1/2-)-26-28-45-61	N; R50: C ≥ 2,5 %	
606-021-00-7	<i>N</i> -methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	212-828-1	872-50-4	Repr. Cat. 2; R61 Xi; R36/37/38	T R: 61-36/37/38 S: 53-45	Repr. Cat. 2; R61: C ≥ 5 % Xi; R36/37/38: C ≥ 10 %	
606-034-00-8	metribuzin (ISO); 4-amino-6- <i>tert</i> -butyl-3- methylthio-1,2,4-triazin-5(4 <i>H</i>)- one; 4-amino-4,5-dihydro-6-(1,1- dimethylethyl)-3-methylthio- 1,2,4-triazin-5-one	244-209-7	21087-64-9	Xn; R22 N; R50-53	Xn; N R: 22-50/53 S: (2-)-60-61	N; R50-53: C ≥ 2,5 % N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	
607-003-00-1	chloroacetic acid	201-178-4	79-11-8	T; R23/24/25 C; R34 N; R50	T; N R: 23/24/25-34-50 S: (1/2-)-26-36/37/39-45-61-63	C; R34: C ≥ 10 % Xn; 36/37/38: 5 % ≤ C < 10 %	
607-007-00-3	salts of oxalic acid with the exception of those specified elsewhere in this Annex	-	-	Xn; R21/22	Xn R: 21/22 S: (2-)-24/25	Xn; R21/22: C ≥ 5 %	A
607-012-00-0	benzoyl chloride	202-710-8	98-88-4	Xn; R20/21/22 C; R34 R43	C R: 20/21/22-34-43 S: (1/2-)-26-36/37/39-45		
607-037-00-7	2-ethoxyethyl acetate; ethylglycol acetate	203-839-2	111-15-9	R10 Repr. Cat. 2; R60-61 Xn; R20/21/22	T R: 60-61-10-20/21/22 S: 53-45		E
607-051-00-3	MCPA (ISO); 4-chloro- <i>o</i> -tolxyoxyacetic acid	202-360-6	94-74-6	Xn; R22 Xi; R38-41 N; R50-53	Xn; N R: 22-38-41-50/53 S: (2-)-26-37-39-60-61		
607-052-00-9	salts and esters of MCPA	-	-	Xn; R20/21/22 N; R50-53	Xn; N R: 20/21/22-50/53 S: (2-)-13-60-61		A
607-065-00-X	bromoacetic acid	201-175-8	79-08-3	T; R23/24/25 C; R35 R43 N; R50	T; C; N R: 23/24/25-35-43-50 S: (1/2-)-26-36/37/39-45-61		
607-085-00-9	benzyl benzoate	204-402-9	120-51-4	Xn; R22	Xn; N		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				N; R51-53	R: 22-51/53 S: (2-)25-46-61		
607-095-00-3	maleic acid	203-742-5	110-16-7	Xn; R22 Xi; R36/37/38 R43	Xn R: 22-36/37/38-43 S: (2-)24-26-28-37-46	R43: C ≥ 0,1 %	
607-103-00-5	succinic anhydride	203-570-0	108-30-5	Xn; R22 Xi; R36/37	Xn R: 22-36/37 S: (2-)25-46	Xn; R22: C ≥ 5 % Xi; R36/37: C ≥ 1 %	
607-142-00-8	propyl chloroformate; chloroformic acid propylester; <i>n</i> -propyl chloroformate	203-687-7	109-61-5	F; R11 T; R23 C; R34	F; T R: 11-23-34 S: (1/2-)16-26-36-45		
607-162-00-7	dalapon; 2,2-dichloropropionic acid; [1] dalapon-sodium; sodium 2,2-dichloropropionate [2]	200-923-0 [1] 204-828-5 [2]	75-99-0 [1] 127-20-8 [2]	Xi; R38-41 R52-53	Xi R: 38-41-52/53 S: (2-)26-39-61		
607-177-00-9	tribenuron methyl (ISO); 2-[4-methoxy-6-methyl-1,3,5- triazin-2- yl(methyl)carbamoylsulfamoyl]b enzoic acid methyl ester; methyl 2-(3-(4-methoxy-6- methyl-1,3,5-triazin-2-yl)-3- methylureidosulfonyl)benzoate	401-190-1	101200-48-0	R43 N; R50-53	Xi; N R: 43-50/53 S: (2-)24-37-46-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
607-189-00-4	trimethylenediaminetetraacetic acid	400-400-9	1939-36-2	Xn; R22 Xi; R41	Xn R: 22-41 S: (2-)22-26-39		
607-195-00-7	2-methoxy-1-methylethyl acetate	203-603-9	108-65-6	R10	R: 10 S: (2-)		
607-213-00-3	ethyl 3,3-bis(<i>tert</i> - pentylperoxy)butyrate	403-320-2	67567-23-1	E; R3 O; R7 R10 N; R51-53	E; N R: 3-7-10-51/53 S: (2-)3/7-14-33-36/37/39-61		
607-216-00-X	glutamic acid, reaction products with <i>N</i> -(C ₁₂₋₁₄ - alkyl)propylenediamine	403-950-8	-	T+; R26 Xn; R22 C; R34 N; R50	T+; N R: 22-26-34-50 S: (1/2-)26-36/37/39-38-45-61		
607-231-00-1	clopyralid (ISO); 3,6-dichloropyridine-2-carboxylic acid	216-935-4	1702-17-6	Xi; R41	Xi R: 41 S: (2-)26-39		
607-245-00-8	<i>tert</i> -butyl acrylate	216-768-7	1663-39-4	F; R11 Xn; R20/21/22 Xi; R37/38 R43	F; Xn; N R: 11-20/21/22-37/38-43-51/53 S: (2-)16-25-37-61		D

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				N; R51-53			
607-252-00-6	lambda-cyhalothrin (ISO); reaction mass of (S)- α -cyano-3-phenoxybenzyl(Z)-(1R)-cis-3-(2-chloro-3,3,3-trifluoropropenyl)-2,2-dimethylcyclopropanecarboxylate and (R)- α -cyano-3-phenoxybenzyl (Z)-(1S)-cis-3-(2-chloro-3,3,3-trifluoropropenyl)-2,2-dimethylcyclopropanecarboxylate (1:1)	415-130-7	91465-08-6	T+; R26 T; R25 Xn; R21 N; R50-53	T+; N R: 21-25-26-50/53 S: (1/2-)28-36/37/39-38-45-60-61	N; R50-53: $C \geq 0,0025 \%$ N; R51-53: $0,00025 \% \leq C < 0,0025 \%$ R52-53: $0,000025 \% \leq C < 0,00025 \%$	
607-253-00-1	cyfluthrin (ISO); α -cyano-4-fluoro-3-phenoxybenzyl-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	269-855-7	68359-37-5	T+; R28 T; R23 N; R50-53	T+; N R: 23-28-50/53 S: (1/2-)28-36/37/39-45-60-61	N; R50-53: $C \geq 0,025 \%$ N; R51-53: $0,0025 \% \leq C < 0,025 \%$ R52-53: $0,00025 \% \leq C < 0,0025 \%$	
607-319-00-X	deltamethrin (ISO); (S)- α -cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate	258-256-6	52918-63-5	T; R23/25 N; R50-53	T; N R: 23/25-50/53 S: (1/2-)24-28-36/37/39-38-45-60-61	N; R50-53: $C \geq 0,000025 \%$ N; R51-53: $0,0000025 \% \leq C < 0,000025 \%$ R52-53: $0,00000025 \% \leq C < 0,0000025 \%$	
607-397-00-5	reaction mass of: Ca salicylates (branched C ₁₀₋₁₄ and C ₁₈₋₃₀ alkylated); Ca phenates (branched C ₁₀₋₁₄ and C ₁₈₋₃₀ alkylated); Ca sulfurised phenates (branched C ₁₀₋₁₄ and C ₁₈₋₃₀ alkylated)	415-930-6	-	Repr. Cat. 3; R62 R43	Xn R: 43-62 S: (2-)23-36/37		
607-422-00-X	α -cypermethrin (ISO); racemate comprising (R)- α -cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate ; (S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	257-842-9	67375-30-8	T; R25 Xn; R48/22 Xi; R37 N; R50-53	T; N R: 25-37-48/22-50/53 S: (1/2-)36/37/39-45-60-61	N; R50-53: $C \geq 0,025 \%$ N; R51-53: $0,0025 \% \leq C < 0,025 \%$ R52-53: $0,00025 \% \leq C < 0,0025 \%$	
608-005-00-5	n-butyronitrile	203-700-6	109-74-0	F; R11 T; R23/24/25	F; T R: 11-23/24/25 S: (1/2-)16-36/37-45-63		
608-011-00-8	oxalonnitrile; cyanogen	207-306-5	460-19-5	F+; R12 T; R23 N; R50-53	F+; T; N R: 12-23-50/53 S: (1/2-)9-16-23-33-45-63-60-61		
608-014-00-4	chlorothalonil (ISO);	217-588-1	1897-45-6	Carc. Cat. 3; R40	T+; N	N; R50-53: $C \geq 2,5 \%$	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	tetrachloroisophthalonitrile			T+; R26 Xi; R37-41 R43 N; R50-53	R: 26-37-40-41-43-50/53 S: (1/2-)28-36/37/39-45-60-61	N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	
608-034-00-3	chlorfenapyr (ISO); 4-bromo-2-(4-chlorophenyl)-1-ethoxymethyl-5-trifluoromethylpyrrole-3-carbonitrile	-	122453-73-0	T; R23 Xn; R22 N; R50-53	T; N R: 22-23-50/53 S: (1/2-)13-36/37-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
608-058-00-4	esfenvalerate (ISO); (S)-α-cyano-3-phenoxybenzyl-(S)-2-(4-chlorophenyl)-3-methylbutyrate	-	66230-04-4	T; R23/25 R43 N; R50-53	T; N R: 23/25-43-50/53 S: (1/2-)24-36/37/39-45-60-61	N; R50-53: C ≥ 0,0025 % N; R51-53: 0,00025 % ≤ C < 0,0025 % R52-53: 0,000025 % ≤ C < 0,00025 %	
609-005-00-8	1,3,5-trinitrobenzene	202-752-7	99-35-4	E; R3 T+; R26/27/28 R33 N; R50-53	E; T+; N R: 3-26/27/28-33-50/53 S: (1/2-)28-36/37-45-60-61		
609-007-00-9	2,4-dinitrotoluene; [1] dinitrotoluene [2]	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [2]	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R23/24/25 Xn; R48/22 N; R50-53	T; N R: 45-23/24/25-48/22-62-68-50/53 S: 53-45-60-61		E
609-009-00-X	2,4,6-trinitrophenol; picric acid	201-865-9	88-89-1	E; R3 R4 T; R23/24/25	E; T R: 3-4-23/24/25 S: (1/2-)28-35-36/37-45		
609-018-00-9	2,4,6-trinitroresorcinol; styphnic acid	201-436-6	82-71-3	E; R3 R4 Xn; R20/21/22	E; Xn R: 3-4-20/21/22 S: (2-)35-36/37		
609-023-00-6	dinocap (ISO); (RS)-2,6-dinitro-4-octylphenyl crotonates and (RS)-2,4-dinitro-6-octylphenyl crotonates in which "octyl" is a reaction mass of 1-methylheptyl, 1-ethylhexyl and 1-propylpentyl groups	254-408-0	39300-45-3	Repr. Cat. 2; R61 Xn; R20/22-48/22 Xi; R38 R43 N; R50-53	T; N R: 61-20/22-38-43-48/22-50/53 S: 53-45-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	E
609-046-00-1	trifluralin (ISO) (containing < 0.5 ppm NPDA); α,α,α-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine (containing < 0.5 ppm NPDA); 2,6-dinitro-N,N-dipropyl-4-trifluoromethylaniline (containing < 0.5 ppm NPDA);	216-428-8	1582-09-8	Carc. Cat. 3; R40 R43 N; R50-53	Xn; N R: 40-43-50/53 S: (2-)36/37-46-60-61	N; R50-53: C ≥ 2,5 % N; R51-53: 0,25 % ≤ C < 2,5 % R52-53: 0,025 % ≤ C < 0,25 %	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	<i>N,N</i> -dipropyl-2,6-dinitro-4-trifluoromethylaniline (containing < 0.5 ppm NPDA)						
611-028-00-3	<i>C,C'</i> -azodi(formamide)	204-650-8	123-77-3	E; R2 R42	E; Xn R: 2-42 S: (2-)22-24-37		
611-035-00-1	tetralithium 6-amino-4-hydroxy-3-[7-sulfonato-4-(5-sulfonato-2-naphthylazo)-1-naphthylazo]naphthalene-2,7-disulfonate	403-660-1	107246-80-0	N; R51-53	N R: 51/53 S: 61		
611-067-00-6	reaction mass of: bis(tris(2-(2-hydroxy(1-methyl)ethoxy)ethyl)ammonium) 7-anilino-4-hydroxy-3-(2-methoxy-5-methyl-4-(4-sulfonatophenylazo)phenylazo)naphthalene-2-sulfonate; bis(tris(2-(2-hydroxy(2-methyl)ethoxy)ethyl)ammonium) 7-anilino-4-hydroxy-3-(2-methoxy-5-methyl-4-(4-sulfonatophenylazo)phenylazo)naphthalene-2-sulfonate	406-910-8	-	Xn; R22 R52-53	Xn R: 22-52/53 S: (2-)22-61		
611-130-00-8	tetra-ammonium 2-[6-[7-(2-carboxylato-phenylazo)-8-hydroxy-3,6-disulfonato-1-naphthylamino]-4-hydroxy-1,3,5-triazin-2-ylamino]benzoate	418-520-5	183130-96-3	Xi; R36 R52-53	Xi R: 36-52/53 S: (2-)26-39-61		
612-017-00-6	<i>N</i> -methyl- <i>N</i> -2,4,6-tetranitroaniline; tetryl	207-531-9	479-45-8	E; R3 T; R23/24/25 R33	E; T R: 3-23/24/25-33 S: (1/2-)35-36/37-45-63		
612-018-00-1	bis(2,4,6-trinitrophenyl)amine; hexyl	205-037-8	131-73-7	E; R3 T+; R26/27/28 R33 N; R51-53	E; T+; N R: 3-26/27/28-33-51/53 S: (1/2-)27/28-35-36/37-45-61-63		
612-019-00-7	dipicrylamine, ammonium salt	220-639-0	2844-92-0	E; R3 T+; R26/27/28 R33 N; R51-53	E; T+; N R: 3-26/27/28-33-51/53 S: (1/2-)27/28-36/37-45-61-63		
612-034-00-9	2-amino-4,6-dinitrophenol; picramic acid	202-544-6	96-91-3	E; R2 Xn; R20/21/22 R52-53	E; Xn R: 2-20/21/22-52/53 S: (2-)35-36/37-46-61		
612-044-00-3	<i>N,N'</i> -diacetylbenzidine	210-338-2	613-35-4	Carc. Cat. 2; R45 Muta. Cat. 3; R68	T R: 45-20/21/22-68		E

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
				Xn; R20/21/22	S: 53-45		
612-050-00-6	cyclohexylamine	203-629-0	108-91-8	R10 Repr. Cat. 3; R62 Xn; R21/22 C; R34	C R: 10-21/22-34-62 S: (1/2-)26-36/37/39-45	C; 34: C ≥ 10 % Xi; R36/38: 2% ≤ C < 10 %	
612-057-00-4	piperazine; [solid]	203-808-3	110-85-0	Repr. Cat. 3; R62-63 C; R34 R42/43	Xn; C R: 34-42/43-62-63 S: (1/2-)22-26-36/37/39-45		
612-076-00-8	ethyltrimethylamine	209-940-8	598-56-1	F; R11 Xn; R20/22 C; R34	F; C R: 11-20/22-34 S: (1/2-)3-16-26-36-45		
612-083-00-6	1-methyl-3-nitro-1-nitrosoguanidine	200-730-1	70-25-7	Carc. Cat. 2; R45 Xn; R20 Xi; R36/38 N; R51-53	T; N R: 45-20-36/38-51/53 S: 53-45-61	Carc. Cat. 2; R45: C ≥ 0,01 %	E
612-094-00-6	4-(2-chloro-4-trifluoromethyl)phenoxy-2-fluoroaniline hydrochloride	402-190-4	113674-95-6	T; R48/25 Xn; R22-48/20 Xi; R41 R43 N; R50-53	T; N R: 22-41-43-48/20-48/25-50/53 S: (1/2-)26-36/37/39-45-60-61		
612-098-00-8	nitrosodipropylamine	210-698-0	621-64-7	Carc. Cat. 2; R45 Xn; R22 N; R51-53	T; N R: 45-22-51/53 S: 53-45-61	Carc. Cat. 2; R45: C ≥ 0,001 %	E
612-099-00-3	4-methyl- <i>m</i> -phenylenediamine; 2,4-toluenediamine	202-453-1	95-80-7	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R25 Xn; R21-48/22 R43 N; R51-53	T; N R: 45-21-25-43-48/22-62-68-51/53 S: 53-45-61		E
612-101-00-2	methenamine; hexamethylenetetramine	202-905-8	100-97-0	F; R11 R43	F; Xi R: 11-43 S: (2-)24-37		
612-122-00-7	hydroxylamine% [> 55 % in aqueous solution]	232-259-2	7803-49-8	E; R2 Carc. Cat. 3; R40 Xn; R21/22-48/22 Xi; R37/38-41 R43 N; R50	E; Xn; N R: 2-21/22-37/38-40-41-43-48/22-50 S: (2-)26-36/37/39-61		B
612-123-00-2	hydroxylammonium chloride;	226-798-2 [1]	5470-11-1 [1]	E; R2	E; Xn; N		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydroxylamine hydrochloride; [1] bis(hydroxylammonium) sulfate; hydroxylamine sulfate (2:1) [2]	233-118-8 [2]	10039-54-0 [2]	Carc. Cat. 3; R40 Xn; R21/22-48/22 Xi; R36/38 R43 N; R50	R: 2-21/22-36/38-40-43-48/22-50 S: (2-)36/37-61		
612-151-00-5	methyl-phenylene diamine; diaminotoluene; [technical product – reaction mass of 4-methyl- <i>m</i> -phenylene diamine (EC No 202-453-1) and 2-methyl- <i>m</i> -phenylene diamine (EC No 212-513-9)]	-	-	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R25 Xn; R21-48/22 Xi; R36 R43 N; R51-53	T; N R: 45-21-25-36-43-48/22-62-68-51/53 S: 53-45-61		E
613-003-00-2	1,2,3,4-tetranitrocarbazole	-	6202-15-9	E; R2 Xn; R20/21/22	E; Xn R: 2-20/21/22 S: (2-)35-36/37		
613-010-00-0	ametryn (ISO); 2-ethylamino-4-isopropylamino- 6-methylthio-1,3,5-triazine	212-634-7	834-12-8	Xn; R22 N; R50-53	Xn; N R: 22-50/53 S: (2-)36-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
613-030-00-X	troclosene potassium; [1] troclosene sodium [2]	218-828-8 [1] 220-767-7 [2]	2244-21-5 [1] 2893-78-9 [2]	E; R2 O; R8 Xn; R22 Xi; R36/37 R31 N; R50-53	E; Xn; N R: 2-8-22-31-36/37-50/53 S: (2-)8-26-41-45-60-61	Xn; R22: C ≥ 10 % Xi; R36/37: C ≥ 10 % R31: C ≥ 10 %	T
613-044-00-6	captan (ISO); 1,2,3,6-tetrahydro- <i>N</i> - (trichloromethylthio)phthalimide	205-087-0	133-06-2	Carc. Cat. 3; R40 T; R23 Xi; R41 R43 N; R50	T; N R: 23-40-41-43-50 S: (1/2-)26-29-36/37/39-45-61	N; R50: C ≥ 2,5 %	
613-045-00-1	folpet (ISO); <i>N</i> - (trichloromethylthio)phthalimide	205-088-6	133-07-3	Carc. Cat. 3; R40 Xn; R20 Xi; R36 R43 N; R50	Xn; N R: 20-36-40-43-50 S: (2-)36/37-46-61	N; R50: C ≥ 2,5 %	
613-060-00-3	resmethrin (ISO); 5-benzyl-3-furylmethyl (±)- <i>cis</i> - <i>trans</i> -chrysanthemate	233-940-7	10453-86-8	Xn; R22 N; R50-53	Xn; N R: 22-50/53 S: (2-)60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
613-116-00-7	tolylfluamid (ISO); dichloro- <i>N</i> - [(dimethylamino)sulphonyl]fluor o- <i>N</i> -(<i>p</i> - tolyl)methanesulphenamide; [containing ≥ 0.1% (w/w) of	211-986-9	731-27-1	T+; R26 T; R48/23 Xi; R36/37/38 R43 N; R50	T+; N R: 26-36/37/38-43-48/23-50 S: (1/2-)28-36/37/39-45-63-61	N; R50: C ≥ 2,5 %	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	particles with an aerodynamic diameter of below 50 µm]						
613-120-00-9	bioresmethrin (ISO); (5-benzylfur-3-yl)methyl(1 <i>R</i>)- <i>trans</i> -2,2-dimethyl-3-(2-methylpropenyl)cyclopropanecarboxylate	249-014-0	28434-01-7	N; R50-53	N R: 50/53 S: 60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
613-139-00-2	metsulfuron-methyl (ISO); 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl)benzoic acid	-	74223-64-6	N; R50-53	N R: 50/53 S: 60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
613-163-00-3	azimsulfuron (ISO); 1-(4,6-dimethoxypyrimidin-2-yl)-3-[1-methyl-4-(2-methyl-2 <i>H</i> -tetrazol-5-yl)pyrazol-5-ylsulfonyl]urea	-	120162-55-2	N; R50-53	N R: 50/53 S: 60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
613-164-00-9	flufenacet (ISO); <i>N</i> -(4-fluorophenyl)- <i>N</i> -isopropyl-2-(5-trifluoromethyl-[1,3,4]thiadiazol-2-yl)oxyacetamide	-	142459-58-3	Xn; R22-48/22 R43 N; R50-53	Xn; N R: 22-43-48/22-50/53 S: (2-)13-24-37-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
613-165-00-4	flupyrsulfuron-methyl-sodium (ISO); methyl 2-[[[(4,6-dimethoxypyrimidin-2-ylcarbamoyl)sulfamoyl]-6-trifluoromethyl]nicotinate, monosodium salt	-	144740-54-5	N; R50-53	N R: 50/53 S: 60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
613-166-00-X	flumioxazin (ISO); <i>N</i> -(7-fluoro-3,4-dihydro-3-oxo-4-prop-2-ynyl-2 <i>H</i> -1,4-benzoxazin-6-yl)cyclohex-1-ene-1,2-dicarboxamide	-	103361-09-7	Repr. Cat. 2; R61 N; R50-53	T; N R: 61-50/53 S: 53-45-60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
613-169-00-6	9-vinylcarbazole	216-055-0	1484-13-5	Muta. Cat. 3; R68 Xn; R21/22 Xi; R38 R43 N; R50-53	Xn; N R: 21/22-38-43-68-50/53 S: (2-)22-23-36/37-60-61	N; R50-53: C ≥ 0,25 % N; R51-53: 0,025 % ≤ C < 0,25 % R52-53: 0,0025 % ≤ C < 0,025 %	
613-174-00-3	tetraconazole (ISO); (±) 2-(2,4-dichlorophenyl)-3-(1 <i>H</i> -1,2,4-triazol-1-yl)propyl-1,1,2,2-tetrafluoroethyl ether	407-760-6	112281-77-3	Xn; R20/22 N; R51-53	Xn; N R: 20/22-51/53 S: (2-)36-61		
613-203-00-X	pyraflufen-ethyl (ISO); 2-chloro-5-(4-chloro-5-difluoromethoxy-1-methylpyrazol-3-yl)-4-fluorophenoxyacetic acid ethyl ester; [1]	- [1] - [2]	129630-19-9 [1] 129630-17-7 [2]	N; R50-53	N R: 50/53 S: 60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	pyraflufen (ISO); 2-chloro-5-(4-chloro-5-difluoromethoxy-1-methylpyrazol-3-yl)-4-fluorophenoxyacetic acid [2]						
613-204-00-5	oxadiargyl (ISO); 3-[2,4-dichloro-5-(2-propynyloxy)phenyl]-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3 <i>H</i>)-one; 5- <i>tert</i> -butyl-3-[2,4-dichloro-5-(prop-2-ynyloxy)phenyl]-1,3,4-oxadiazol-2(3 <i>H</i>)-one	254-637-6	39807-15-3	Repr. Cat. 3; R63 Xn; R48/22 N; R50-53	Xn; N R: 48/22-63-50/53 S: (2-)36/37-46-60-61	N; R50-53: C ≥ 0,025 % N; R51-53: 0,0025 % ≤ C < 0,025 % R52-53: 0,00025 % ≤ C < 0,0025 %	
614-005-00-6	colchicine	200-598-5	64-86-8	Muta. Cat. 2; R46 T+; R28	T+ R: 46-28 S: 53-45		E
615-001-00-7	methyl isocyanate	210-866-3	624-83-9	F; R11 Repr. Cat. 3; R63 T+; R26 T; R24/25 R42/43 Xi; R37/38-41	F; T+ R: 11-24/25-26-37/38-41-42/43-63 S: (1/2-)16-26-27/28-36/37/39-45-63		
615-004-00-3	salts of thiocyanic acid, with the exception of those specified elsewhere in this Annex	-	-	Xn; R20/21/22 R32 R52-53	Xn R: 20/21/22-32-52/53 S: (2-)13-36/37-46-61		A
615-005-00-9	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate; [1] 2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate; [2] <i>o</i> -(<i>p</i> -isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate; [3] methylenediphenyl diisocyanate [4]	202-966-0 [1] 219-799-4 [2] 227-534-9 [3] 247-714-0 [4]	101-68-8 [1] 2536-05-2 [2] 5873-54-1 [3] 26447-40-5 [4]	Carc. Cat. 3; R40 Xn; R20-48/20 Xi; R36/37/38 R42/43	Xn R: 20-36/37/38-40-42/43-48/20 S: (1/2-)23-36/37-45	Xi; R36/37/38: C ≥ 5 % R42: C ≥ 0,1 %	C 2
615-022-00-1	methyl 3-isocyanatosulfonyl-2-thiophene-carboxylate	410-550-7	79277-18-2	R14 Xn; R48/22 R42/43	Xn R: 14-42/43-48/22 S: (2-)22-30-35-36/37-45		
615-028-00-4	ethyl 2-(isocyanatosulfonyl)benzoate	410-220-2	77375-79-2	R14 Xn; R22-48/22 Xi; R41 R42/43	Xn R: 14-22-41-42/43-48/22 S: (2-)8-23-26-30-35-36/37/39		

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
615-030-00-5	alkali salts and alkali earth salts of thiocyanic acid, with the exception of those specified elsewhere in this Annex	-	-	Xn; R20/21/22 R32 R52-53	Xn R: 20/21/22-32-52/53 S: (2-)13-36/37-46-61		A
615-031-00-0	thallium thiocyanate	222-571-7	3535-84-0	T+; R26/28 Xn; R21 R32 R33 N; R51-53	T+; N R: 21-26/28-32-33-51/53 S: (1/2-)13-28-36/37-45-61		
615-032-00-6	metal salts of thiocyanic acid, with the exception of those specified elsewhere in this Annex	-	-	Xn; R20/21/22 R32 N; R50-53	Xn; N R: 20/21/22-32-50/53 S: (2-)13-36/37-46-60-61		A
616-006-00-7	dichlofluanid (ISO); <i>N</i> -dichlorofluoromethylthio- <i>N,N'</i> -dimethyl- <i>N</i> - phenylsulfamide	214-118-7	1085-98-9	Xn; R20 Xi; R36 R43 N; R50	Xn; N R: 20-36-43-50 S: (2-)24-37-61	N; R50: C ≥ 2,5 %	
616-009-00-3	propanil (ISO); 3',4'-dichloropropionanilide	211-914-6	709-98-8	Xn; R22 N; R50	Xn; N R: 22-50 S: (2-)22-61	N; R50: C ≥ 2,5 %	
616-124-00-9	lithium bis(trifluoromethylsulfonyl)imide	415-300-0	90076-65-6	T; R24/25 Xn; R48/22 C; R34 R52-53	T R: 24/25-34-48/22-52/53 S: (1/2-)22-26-36/37/39-45-61		
617-008-00-0	dibenzoyl peroxide; benzoyl peroxide	202-327-6	94-36-0	E; R3 O; R7 Xi; R36 R43	E; Xi R: 3-7-36-43 S: (2-)3/7-14-36/37/39		
617-010-00-1	1-hydroperoxycyclohexyl 1- hydroxycyclohexyl peroxide; [1] 1,1'-dioxibiscyclohexan-1-ol; [2] cyclohexylidene hydroperoxide; [3] cyclohexanone, peroxide [4]	201-091-1 [1] 219-306-2 [2] 220-279-4 [3] 235-527-7 [4]	78-18-2 [1] 2407-94-5 [2] 2699-11-8 [3] 12262-58-7 [4]	E; R3 O; R7 C; R34 Xn; R22	E; C R: 3-7-22-34 S: (1/2-)3/7-14-36/37/39-45	C; R34: C ≥ 10 % Xi; R36/37/38: 5 % ≤ C < 10 %	C
617-017-00-X	reaction mass of: 2,2'-bis(<i>tert</i> - pentylperoxy)- <i>p</i> - diisopropylbenzene; 2,2'-bis(<i>tert</i> -pentylperoxy)- <i>m</i> - diisopropylbenzene	412-140-3	32144-25-5	E; R2 O; R7 R53	E R: 2-7-53 S: (2-)3/7-14-36/37/39-61		T
648-002-00-6	Tar oils, brown-coal; Light Oil; [The distillate from lignite tar boiling in the range of approximately 80°C to 250°C	302-674-4	94114-40-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	(176°F to 482°F). Composed primarily of aliphatic and aromatic hydrocarbons and monobasic phenols.]						
648-003-00-1	Benzol forerunnings (coal); Light Oil Redistillate, low boiling; [The distillate from coke oven light oil having an approximate distillation range below 100°C (212°F). Composed primarily of C ₄ to C ₆ aliphatic hydrocarbons.]	266-023-5	65996-88-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-004-00-7	Distillates (coal tar), benzole fraction, BTX-rich; Light Oil Redistillate, low boiling; [A residue from the distillation of crude benzole to remove benzole fronts. Composed primarily of benzene, toluene and xylenes boiling in the range of approximately 75°C to 200°C (167°F to 392°F).]	309-984-9	101896-26-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-005-00-2	Aromatic hydrocarbons, C ₆₋₁₀ , C ₈ -rich; Light Oil Redistillate, low boiling	292-697-5	90989-41-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-006-00-8	Solvent naphtha (coal), light; Light Oil Redistillate, low boiling	287-498-5	85536-17-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-007-00-3	Solvent naphtha (coal), xylene-styrene cut; Light Oil Redistillate, intermediate boiling	287-502-5	85536-20-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-008-00-9	Solvent naphtha (coal), coumarone-styrene contg.; Light Oil Redistillate, intermediate boiling	287-500-4	85536-19-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-009-00-4	Naphtha (coal), distn. residues; Light Oil Redistillate, high boiling; [The residue remaining from the distillation of recovered naphtha. Composed primarily of naphthalene and condensation products of indene and styrene.]	292-636-2	90641-12-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-010-00-X	Aromatic hydrocarbons, C ₈ ; Light Oil Redistillate, high boiling	292-694-9	90989-38-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-012-00-0	Aromatic hydrocarbons, C ₈₋₉ ,	295-281-1	91995-20-9	Carc. Cat. 2; R45	T		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrocarbon resin polymn. by-product; Light Oil Redistillate, high boiling; [A complex combination of hydrocarbons obtained from the evaporation of solvent under vacuum from polymerized hydrocarbon resin. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₈ through C ₉ and boiling in the range of approximately 120°C to 215°C (248°F to 419°F).]			Muta. Cat. 2; R46	R: 45-46 S: 53-45		
648-013-00-6	Aromatic hydrocarbons, C ₉₋₁₂ , benzene distn.; Light Oil Redistillate, high boiling	295-551-9	92062-36-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-014-00-1	Extract residues (coal), benzole fraction alk., acid ext.; Light Oil Extract Residues, low boiling; [The redistillate from the distillate, freed of tar acids and tar bases, from bituminous coal high temperature tar boiling in the approximate range of 90°C to 160°C (194°F to 320°F). It consists predominantly of benzene, toluene and xylenes.]	295-323-9	91995-61-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-015-00-7	Extract residues (coal tar), benzole fraction alk., acid ext.; Light Oil Extract Residues, low boiling; [A complex combination of hydrocarbons obtained by the redistillation of the distillate of high temperature coal tar (tar acid and tar base free). It consists predominantly of unsubstituted and substituted mononuclear aromatic hydrocarbons boiling in the range of 85°C to 195°C (185°F to 383°F).]	309-868-8	101316-63-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-016-00-2	Extract residues (coal), benzole fraction acid; Light Oil Extract Residues, low boiling;	298-725-2	93821-38-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[An acid sludge by-product of the sulfuric acid refining of crude high temperature coal. Composed primarily of sulfuric acid and organic compounds.]						
648-017-00-8	Extract residues (coal), light oil alk., distn. overheads; Light Oil Extract Residues, low boiling; [The first fraction from the distillation of aromatic hydrocarbons, coumarone, naphthalene and indene rich prefractionator bottoms or washed carbolic oil boiling substantially below 145°C (293°F). Composed primarily of C ₇ and C ₈ aliphatic and aromatic hydrocarbons.]	292-625-2	90641-02-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-018-00-3	Extract residues (coal), light oil alk., acid ext., indene fraction; Light Oil Extract Residues, intermediate boiling	309-867-2	101316-62-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-019-00-9	Extract residues (coal), light oil alk., indene naphtha fraction; Light Oil Extract Residues, high boiling; [The distillate from aromatic hydrocarbons, coumarone, naphthalene and indene rich prefractionator bottoms or washed carbolic oils, having an approximate boiling range of 155°C to 180°C (311°F to 356°F). Composed primarily of indene, indan and trimethylbenzenes.]	292-626-8	90641-03-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-020-00-4	Solvent naphtha (coal); Light Oil Extract Residues, high boiling; [The distillate from either high temperature coal tar, coke oven light oil, or coal tar oil alkaline extract residue having an approximate distillation range of 130°C to 210°C (266°F to 410°F). Composed primarily of indene and other polycyclic ring systems containing a single aromatic ring. May contain	266-013-0	65996-79-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	phenolic compounds and aromatic nitrogen bases.]						
648-021-00-X	Distillates (coal tar), light oils, neutral fraction; Light Oil Extract Residues, high boiling; [A distillate from the fractional distillation of high temperature coal tar. Composed primarily of alkyl-substituted one ring aromatic hydrocarbons boiling in the range of approximately 135°C to 210°C (275°F to 410°F). May also include unsaturated hydrocarbons such as indene and coumarone.]	309-971-8	101794-90-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-022-00-5	Distillates (coal tar), light oils, acid exts.; Light Oil Extract Residues, high boiling; [This oil is a complex reaction mass of aromatic hydrocarbons, primarily indene, naphthalene, coumarone, phenol, and <i>o</i> -, <i>m</i> - and <i>p</i> -cresol and boiling in the range of 140°C to 215°C (284°F to 419°F).]	292-609-5	90640-87-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-023-00-0	Distillates (coal tar), light oils; Carbolic Oil; [A complex combination of hydrocarbons obtained by distillation of coal tar. It consists of aromatic and other hydrocarbons, phenolic compounds and aromatic nitrogen compounds and distills at the approximate range of 150°C to 210°C (302°F to 410°F).]	283-483-2	84650-03-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-024-00-6	Tar oils, coal; Carbolic Oil; [The distillate from high temperature coal tar having an approximate distillation range of 130°C to 250°C (266°F to 410°F). Composed primarily of naphthalene, alkylnaphthalenes, phenolic compounds, and aromatic nitrogen bases.]	266-016-7	65996-82-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-026-00-7	Extract residues (coal), light oil alk., acid ext.; Carbolic Oil Extract Residue;	292-624-7	90641-01-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[The oil resulting from the acid washing of alkali-washed carbolic oil to remove the minor amounts of basic compounds (tar bases). Composed primarily of indene, indan and alkylbenzenes.]						
648-027-00-2	Extract residues (coal), tar oil alk.; Carbolic Oil Extract Residue; [The residue obtained from coal tar oil by an alkaline wash such as aqueous sodium hydroxide after the removal of crude coal tar acids. Composed primarily of naphthalenes and aromatic nitrogen bases.]	266-021-4	65996-87-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-028-00-8	Extract oils (coal), light oil; Acid Extract; [The aqueous extract produced by an acidic wash of alkali-washed carbolic oil. Composed primarily of acid salts of various aromatic nitrogen bases including pyridine, quinoline and their alkyl derivatives.]	292-622-6	90640-99-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-029-00-3	Pyridine, alkyl derivs.; Crude Tar Bases; [The complex combination of polyalkylated pyridines derived from coal tar distillation or as high-boiling distillates approximately above 150°C (302°F) from the reaction of ammonia with acetaldehyde, formaldehyde or paraformaldehyde.]	269-929-9	68391-11-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-030-00-9	Tar bases, coal, picoline fraction; Distillate Bases; [Pyridine bases boiling in the range of approximately 125°C to 160°C (257°F 320°F) obtained by distillation of neutralized acid extract of the base-containing tar fraction obtained by the distillation of bituminous coal tars. Composed chiefly of lutidines and picolines.]	295-548-2	92062-33-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-031-00-4	Tar bases, coal, lutidine fraction; Distillate Bases	293-766-2	91082-52-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
					S: 53-45		
648-032-00-X	Extract oils (coal), tar base, collidine fraction; Distillate Bases; [The extract produced by the acidic extraction of bases from crude coal tar aromatic oils, neutralization, and distillation of the bases. Composed primarily of collidines, aniline, toluidines, lutidines, xyloidines.]	273-077-3	68937-63-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-033-00-5	Tar bases, coal, collidine fraction; Distillate Bases; [The distillation fraction boiling in the range of approximately 181 °C to 186 °C (356 °F to 367 °F) from the crude bases obtained from the neutralized, acid-extracted base-containing tar fractions obtained by the distillation of bituminous coal tar. It contains chiefly aniline and collidines.]	295-543-5	92062-28-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-034-00-0	Tar bases, coal, aniline fraction; Distillate Bases; [The distillation fraction boiling in the range of approximately 180 °C to 200 °C (356 °F to 392 °F) from the crude bases obtained by dephenolating and debasing the carbolated oil from the distillation of coal tar. It contains chiefly aniline, collidines, lutidines and toluidines.]	295-541-4	92062-27-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-035-00-6	Tar bases, coal, toluidine fraction; Distillate Bases	293-767-8	91082-53-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-036-00-1	Distillates (petroleum), alkene-alkyne manuf. pyrolysis oil, mixed with high-temp. coal tar, indene fraction; Redistillates; [A complex combination of hydrocarbons obtained as a redistillate from the fractional distillation of bituminous coal high temperature tar and residual oils that are obtained by the pyrolytic production of alkenes	295-292-1	91995-31-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	and alkynes from petroleum products or natural gas. It consists predominantly of indene and boils in a range of approximately 160°C to 190°C (320°F to 374°F).]						
648-037-00-7	Distillates (coal), coal tar-residual pyrolysis oils, naphthalene oils; Redistillates; [The redistillate obtained from the fractional distillation of bituminous coal high temperature tar and pyrolysis residual oils and boiling in the range of approximately 190°C to 270°C (374°F to 518°F). Composed primarily of substituted dinuclear aromatics.]	295-295-8	91995-35-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-038-00-2	Extract oils (coal), coal tar-residual pyrolysis oils, naphthalene oil, redistillate; Redistillates; [The redistillate from the fractional distillation of dephenolated and debased methylnaphthalene oil obtained from bituminous coal high temperature tar and pyrolysis residual oils boiling in the approximate range of 220°C to 230°C (428°F to 446°F). It consists predominantly of unsubstituted and substituted dinuclear aromatic hydrocarbons.]	295-329-1	91995-66-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-039-00-8	Extract oils (coal), coal tar-residual pyrolysis oils, naphthalene oils; Redistillates; [A neutral oil obtained by debasing and dephenolating the oil obtained from the distillation of high temperature tar and pyrolysis residual oils which has a boiling range of 225°C to 255°C (437°F to 491°F). Composed primarily of substituted dinuclear aromatic hydrocarbons.]	310-170-0	122070-79-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-040-00-3	Extract oils (coal), coal tar	310-171-6	122070-80-8	Carc. Cat. 2; R45	T		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	residual pyrolysis oils, naphthalene oil, distn. residues; Redistillates; [Residue from the distillation of dephenolated and debased methylnaphthalene oil (from bituminous coal tar and pyrolysis residual oils) with a boiling range of 240°C to 260°C (464°F to 500°F). Composed primarily of substituted dinuclear aromatic and heterocyclic hydrocarbons.]			Muta. Cat. 2; R46	R: 45-46 S: 53-45		
648-043-00-X	Creosote oil, acenaphthene fraction, acenaphthene-free; Wash Oil Redistillate; [The oil remaining after removal by a crystallization process of acenaphthene from acenaphthene oil from coal tar. Composed primarily of naphthalene and alkyl naphthalenes.]	292-606-9	90640-85-0	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-080-00-1	Residues (coal tar), creosote oil distn.; Wash Oil Redistillate; [The residue from the fractional distillation of wash oil boiling in the approximate range of 270°C to 330°C (518°F to 626°F). It consists predominantly of dinuclear aromatic and heterocyclic hydrocarbons.]	295-506-3	92061-93-3	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-084-00-3	Distillates (coal), coke-oven light oil, naphthalene cut; Naphthalene Oil; [The complex combination of hydrocarbons obtained from prefractionation (continuous distillation) of coke oven light oil. It consists predominantly of naphthalene, coumarone and indene and boils above 148°C (298°F).]	285-076-5	85029-51-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-085-00-9	Distillates (coal tar), naphthalene oils; Naphthalene Oil; [A complex combination of hydrocarbons obtained by the distillation of coal tar. It consists primarily of aromatic and other hydrocarbons, phenolic	283-484-8	84650-04-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	compounds and aromatic nitrogen compounds and distills in the approximate range of 200°C to 250°C (392°F to 482°F).]						
648-086-00-4	Distillates (coal tar), naphthalene oils, naphthalene-low; Naphthalene Oil Redistillate; [A complex combination of hydrocarbons obtained by crystallization of naphthalene oil. Composed primarily of naphthalene, alkyl naphthalenes and phenolic compounds.]	284-898-1	84989-09-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-087-00-X	Distillates (coal tar), naphthalene oil crystn. mother liquor; Naphthalene Oil Redistillate; [A complex combination of organic compounds obtained as a filtrate from the crystallization of the naphthalene fraction from coal tar and boiling in the range of approximately 200°C to 230°C (392°F to 446°F). Contains chiefly naphthalene, thionaphthene and alkyl naphthalenes.]	295-310-8	91995-49-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-088-00-5	Extract residues (coal), naphthalene oil, alk.; Naphthalene Oil Extract Residue; [A complex combination of hydrocarbons obtained from the alkali washing of naphthalene oil to remove phenolic compounds (tar acids). It is composed of naphthalene and alkyl naphthalenes.]	310-166-9	121620-47-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-089-00-0	Extract residues (coal), naphthalene oil, alk., naphthalene-low; Naphthalene Oil Extract Residue; [A complex combination of hydrocarbons remaining after the removal of naphthalene from alkali-washed naphthalene oil by a crystallization process. It is composed primarily of naphthalene and alkyl naphthalenes.]	310-167-4	121620-48-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-090-00-6	Distillates (coal tar), naphthalene	292-612-1	90640-90-7	Carc. Cat. 2; R45	T		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	oils, naphthalene-free, alk. exts.; Naphthalene Oil Extract Residue; [The oil remaining after the removal of phenolic compounds (tar acids) from drained naphthalene oil by an alkali wash. Composed primarily of naphthalene and alkyl naphthalenes.]			Muta. Cat. 2; R46	R: 45-46 S: 53-45		
648-091-00-1	Extract residues (coal), naphthalene oil alk., distn. overheads; Naphthalene Oil Extract Residue; [The distillate from alkali-washed naphthalene oil having an approximate distillation range of 180°C to 220°C (356°F to 428°F). Composed primarily of naphthalene, alkylbenzenes, indene and indan.]	292-627-3	90641-04-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-092-00-7	Distillates (coal tar), naphthalene oils, methylnaphthalene fraction; Methylnaphthalene Oil; [A distillate from the fractional distillation of high temperature coal tar. Composed primarily of substituted two ring aromatic hydrocarbons and aromatic nitrogen bases boiling in the range of approximately 225°C to 255°C (437°F to 491°F).]	309-985-4	101896-27-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-093-00-2	Distillates (coal tar), naphthalene oils, indole-methylnaphthalene fraction; Methylnaphthalene Oil; [A distillate from the fractional distillation of high temperature coal tar. Composed primarily of indole and methylnaphthalene boiling in the range of approximately 235°C to 255°C (455°F to 491°F).]	309-972-3	101794-91-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-094-00-8	Distillates (coal tar), naphthalene oils, acid exts.; Methylnaphthalene Oil Extract Residue; [A complex combination of hydrocarbons obtained by debasing the methylnaphthalene fraction obtained by the	295-309-2	91995-48-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	distillation of coal tar and boiling in the range of approximately 230°C to 255°C (446°F to 491°F). Contains chiefly 1(2)-methylnaphthalene, naphthalene, dimethylnaphthalene and biphenyl.]						
648-095-00-3	Extract residues (coal), naphthalene oil alk., distn. residues; Methylnaphthalene Oil Extract Residue; [The residue from the distillation of alkali-washed naphthalene oil having an approximate distillation range of 220°C to 300°C (428°F to 572°F). Composed primarily of naphthalene, alkyl naphthalenes and aromatic nitrogen bases.]	292-628-9	90641-05-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-096-00-9	Extract oils (coal), acidic, tar-base free; Methylnaphthalene Oil Extract Residue; [The extract oil boiling in the range of approximately 220°C to 265°C (428°F to 509°F) from coal tar alkaline extract residue produced by an acidic wash such as aqueous sulfuric acid after distillation to remove tar bases. Composed primarily of alkyl naphthalenes.]	284-901-6	84989-12-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-097-00-4	Distillates (coal tar), benzole fraction, distn. residues; Wash Oil; [A complex combination of hydrocarbons obtained from the distillation of crude benzole (high temperature coal tar). It may be a liquid with the approximate distillation range of 150°C to 300°C (302°F to 572°F) or a semi-solid or solid with a melting point up to 70°C (158°F). It is composed primarily of naphthalene and alkyl naphthalenes.]	310-165-3	121620-46-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-098-00-X	Creosote oil, acenaphthene fraction;	292-605-3	90640-84-9	Carc. Cat. 2; R45	T R: 45		H M

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	Wash Oil; [A complex combination of hydrocarbons produced by the distillation of coal tar and boiling in the range of approximately 240°C to 280°C (464°F to 536°F). Composed primarily of acenaphthene, naphthalene and alkyl naphthalene.]				S: 53-45		
648-099-00-5	Creosote oil; [A complex combination of hydrocarbons obtained by the distillation of coal tar. It consists primarily of aromatic hydrocarbons and may contain appreciable quantities of tar acids and tar bases. It distills at the approximate range of 200°C to 325°C (392°F to 617°F).]	263-047-8	61789-28-4	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-100-00-9	Creosote oil, high-boiling distillate; Wash Oil; [The high-boiling distillation fraction obtained from the high temperature carbonization of bituminous coal which is further refined to remove excess crystalline salts. It consists primarily of creosote oil with some of the normal polynuclear aromatic salts, which are components of coal tar distillates, removed. It is crystal free at approximately 5°C (41°F).]	274-565-9	70321-79-8	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-102-00-X	Extract residues (coal), creosote oil acid; Wash Oil Extract Residue; [A complex combination of hydrocarbons from the base-freed fraction from the distillation of coal tar, boiling in the range of approximately 250°C to 280°C (482°F to 536°F). It consists predominantly of biphenyl and isomeric diphenyl naphthalenes.]	310-189-4	122384-77-4	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-103-00-5	Anthracene oil, anthracene paste; Anthracene Oil Fraction; [The anthracene-rich solid obtained by the crystallization and centrifuging of anthracene	292-603-2	90640-81-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	oil. It is composed primarily of anthracene, carbazole and phenanthrene.]						
648-104-00-0	Anthracene oil, anthracene-low; Anthracene Oil Fraction; [The oil remaining after the removal, by a crystallization process, of an anthracene-rich solid (anthracene paste) from anthracene oil. It is composed primarily of two, three and four membered aromatic compounds.]	292-604-8	90640-82-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-105-00-6	Residues (coal tar), anthracene oil distn.; Anthracene Oil Fraction; [The residue from the fraction distillation of crude anthracene boiling in the approximate range of 340°C to 400°C (644°F to 752°F). It consists predominantly of tri- and polynuclear aromatic and heterocyclic hydrocarbons.]	295-505-8	92061-92-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-106-00-1	Anthracene oil, anthracene paste, anthracene fraction; Anthracene Oil Fraction; [A complex combination of hydrocarbons from the distillation of anthracene obtained by the crystallization of anthracene oil from bituminous high temperature tar and boiling in the range of 330°C to 350°C (626°F to 662°F). It contains chiefly anthracene, carbazole and phenanthrene.]	295-275-9	91995-15-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-107-00-7	Anthracene oil, anthracene paste, carbazole fraction; Anthracene Oil Fraction; [A complex combination of hydrocarbons from the distillation of anthracene obtained by crystallization of anthracene oil from bituminous coal high temperature tar and boiling in the approximate range of 350°C to 360°C (662°F to 680°F). It contains chiefly anthracene, carbazole and phenanthrene.]	295-276-4	91995-16-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-108-00-2	Anthracene oil, anthracene paste,	295-278-5	91995-17-4	Carc. Cat. 2; R45	T		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	distn. lights; Anthracene Oil Fraction; [A complex combination of hydrocarbons from the distillation of anthracene obtained by crystallization of anthracene oil from bituminous high temperature tar and boiling in the range of approximately 290°C to 340°C (554°F to 644°F). It contains chiefly trinuclear aromatics and their dihydro derivatives.]			Muta. Cat. 2; R46	R: 45-46 S: 53-45		
648-109-00-8	Tar oils, coal, low-temp.; Tar Oil, high boiling; [A distillate from low-temperature coal tar. Composed primarily of hydrocarbons, phenolic compounds and aromatic nitrogen bases boiling in the range of approximately 160°C to 340°C (320°F to 644°F).]	309-889-2	101316-87-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-110-00-3	Extract residues (coal), low temp. coal atar alk.; [The residue from low temperature coal tar oils after an alkaline wash, such as aqueous sodium hydroxide, to remove crude coal tar acids. Composed primarily of hydrocarbons and aromatic nitrogen bases.]	310-191-5	122384-78-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-111-00-9	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 (1292°F)) destructive distillation of coal. It consists predominantly of a reaction mass of monohydric and dihydric phenols.]	284-881-9	84988-93-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-112-00-4	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	292-610-0	90640-88-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	primarily of the alkali salts of various phenolic compounds.]						
648-113-00-X	Extracts, coal tar oil alk.; Alkaline Extract; [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.]	266-017-2	65996-83-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-114-00-5	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.]	292-611-6	90640-89-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-115-00-0	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.]	292-629-4	90641-06-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-116-00-6	Tar acids, coal, crude; Crude Phenols; [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.]	266-019-3	65996-85-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-117-00-1	Tar acids, brown-coal, crude; Crude Phenols; [An acidified alkaline extract of brown coal tar distillate. Composed primarily of phenol and phenol homologs.]	309-888-7	101316-86-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-118-00-7	Tar acids, brown-coal gasification; Crude Phenols; [A complex combination of organic compounds obtained	295-536-7	92062-22-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	from brown coal gasification. Composed primarily of C ₆₋₁₀ hydroxy aromatic phenols and their homologs.]						
648-119-00-2	Tar acids, distn. residues; Distillate Phenols; [A residue from the distillation of crude phenol from coal. It consists predominantly of phenols having carbon numbers in the range of C ₈ through C ₁₀ with a softening point of 60°C to 80°C (140°F to 176°F).]	306-251-5	96690-55-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-120-00-8	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.]	284-892-9	84989-04-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-121-00-3	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.]	284-893-4	84989-05-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-122-00-9	Tar acids, xylenol fraction; Distillate Phenols; [The fraction of tar acids, rich in 2,4- and 2,5-dimethylphenol, recovered by distillation of low-temperature coal tar crude tar acids.]	284-895-5	84989-06-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-123-00-4	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.]	284-891-3	84989-03-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-124-00-X	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.]	284-896-0	84989-07-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-125-00-5	Tar acids, residues, distillates,	270-713-1	68477-23-6	Carc. Cat. 2; R45	T		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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.]			Muta. Cat. 2; R46	R: 45-46 S: 53-45		
648-126-00-0	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.]	271-418-0	68555-24-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-127-00-6	Phenols, C ₉₋₁₁ ; Distillate Phenols	293-435-2	91079-47-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-128-00-1	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.]	295-540-9	92062-26-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-129-00-7	Tar acids, brown-coal, C ₂ -alkylphenol fraction; Distillate Phenols; [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 <i>m</i> - and <i>p</i> -ethylphenol as well as cresols and xylenols.]	302-662-9	94114-29-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-130-00-2	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	292-623-1	90641-00-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	derivatives.]						
648-131-00-8	Tar bases, quinoline derivs.; Distillate Bases	271-020-7	68513-87-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-132-00-3	Tar bases, coal, quinoline derivs. fraction; Distillate Bases	274-560-1	70321-67-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-133-00-9	Tar bases, coal, distn. residues; Distillate Bases; [The distillation residue remaining after the distillation of 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.]	295-544-0	92062-29-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-134-00-4	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 reaction mass 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).]	309-745-9	100801-63-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-135-00-X	Hydrocarbon oils, arom., mixed with polyethylene, pyrolyzed, light oil fraction; Heat Treatment Products; [The oil obtained from the heat treatment of polyethylene with coal tar pitch or aromatic oils. It consists predominantly of benzene and its homologs boiling in a range of 70°C to 120°C (158°F to 248°F).]	309-748-5	100801-65-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-136-00-5	Hydrocarbon oils, arom., mixed with polystyrene, pyrolyzed, light oil fraction; Heat Treatment Products; [The oil obtained from the heat treatment of polystyrene with	309-749-0	100801-66-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
648-137-00-0	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 condensed ring aromatic hydrocarbons and aromatic nitrogen bases.]	277-567-8	73665-18-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-138-00-6	Creosote oil, low-boiling distillate; Wash Oil; [The low-boiling distillation fraction obtained from the high temperature carbonization of bituminous coal, which is further refined to remove excess crystalline salts. It consists primarily of creosote oil with some of the normal polynuclear aromatic salts, which are components of coal tar distillate, removed. It is crystal free at approximately 38°C (100°F).]	274-566-4	70321-80-1	Carc. Cat. 2; R45	T R: 45 S: 53-45		H M
648-139-00-1	Tar acids, cresylic, sodium salts, caustic solns.; Alkaline Extract	272-361-4	68815-21-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-140-00-7	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.]	266-020-9	65996-86-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM
648-141-00-2	Tar bases, coal, crude; Crude Tar Bases; [The reaction product obtained by neutralizing coal tar base extract	266-018-8	65996-84-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		HJM

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	oil with an alkaline solution, such as aqueous sodium hydroxide, to obtain the free bases. Composed primarily of such organic bases as acridine, phenanthridine, pyridine, quinoline and their alkyl derivatives.]						
648-147-00-5	Light oil (coal), coke-oven; Crude benzole; [The volatile organic liquid extracted from the gas evolved in the high temperature (greater than 700°C (1292°F)) destructive distillation of coal. Composed primarily of benzene, toluene, and xylenes. May contain other minor hydrocarbon constituents.]	266-012-5	65996-78-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-148-00-0	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 nitrogen, oxygen and sulfur, and their alkyl derivatives having carbon numbers predominantly in the range of C ₄ through C ₁₄ .]	302-688-0	94114-52-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-149-00-6	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 C ₄ through C ₁₄ . Nitrogen, sulfur and oxygen-	302-689-6	94114-53-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	containing aromatic and hydrogenated aromatic compounds are also present.]						
648-150-00-1	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.]	302-690-1	94114-54-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-152-00-2	Distillates (coal), solvent extn., hydrocracked middle; [Distillate obtained from the hydrocracking of coal extract or solution produced by the liquid solvent extraction or supercritical gas extraction processes and boiling in the range of approximately 180°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 C ₉ through C ₁₄ . Nitrogen, sulfur and oxygen-containing compounds are also present.]	302-692-2	94114-56-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
648-153-00-8	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	302-693-8	94114-57-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	gas extraction processes and boiling in the range of approximately 180°C to 280°C (356°F to 536°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 .]						
648-156-00-4	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 (1292°F)) destructive distillation of coal. Composed primarily of C ₆₋₁₀ hydrocarbons.]	292-635-7	90641-11-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46 S: 53-45		H J
649-062-00-6	Gases (petroleum), catalytic cracked naphtha depropanizer 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 numbers in the range of C ₂ through C ₄ , predominantly C ₃ .]	270-755-0	68477-73-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-063-00-1	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 .]	270-756-6	68477-74-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-064-00-7	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	270-757-1	68477-75-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	having carbon numbers in the range of C ₁ through C ₆ , predominantly C ₁ through C ₅ .]						
649-065-00-2	Gases (petroleum), catalytic polymd. naphtha stabilizer overhead, C ₂₋₄ -rich; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation stabilization of catalytic polymerized naphtha. It consists of aliphatic hydrocarbons having carbon numbers in the range of C ₂ through C ₆ , predominantly C ₂ through C ₄ .]	270-758-7	68477-76-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-066-00-8	Gases (petroleum), catalytic reformer, C ₁₋₄ -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 C ₁ through C ₆ , predominantly C ₁ through C ₄ .]	270-760-8	68477-79-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-067-00-3	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.]	270-765-5	68477-83-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-068-00-9	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 .]	270-767-6	68477-85-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-069-00-4	Gases (petroleum), deethanizer	270-768-1	68477-86-1	F+; R12	F+; T		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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.]			Carc. Cat. 1; R45 Muta. Cat. 2; R46	R: 45-46-12 S: 53-45		
649-070-00-X	Gases (petroleum), deisobutanizer 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 .]	270-769-7	68477-87-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-071-00-5	Gases (petroleum), depropanizer 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.]	270-772-3	68477-90-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-072-00-0	Gases (petroleum), depropanizer 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 .]	270-773-9	68477-91-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-073-00-6	Gases (petroleum), gas recovery plant depropanizer overheads; Petroleum gas; [A complex combination of hydrocarbons obtained by fractionation of miscellaneous hydrocarbon streams. It consists	270-777-0	68477-94-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	predominantly of hydrocarbons having carbon numbers in the range of C ₁ through C ₄ , predominantly propane.]						
649-074-00-1	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 .]	270-778-6	68477-95-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-075-00-7	Gases (petroleum), isomerized naphtha fractionator, C ₄ -rich, hydrogen sulfide-free; Petroleum gas	270-782-8	68477-99-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-076-00-2	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 .]	270-802-5	68478-21-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-077-00-8	Tail gas (petroleum), catalytic cracked naphtha stabilization absorber; Petroleum gas; [A complex combination of hydrocarbons obtained from the stabilization of catalytic cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]	270-803-0	68478-22-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-078-00-3	Tail gas (petroleum), catalytic cracker, catalytic reformer and hydrodesulfurizer combined fractionator;	270-804-6	68478-24-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation of products from catalytic cracking, catalytic reforming and hydrodesulfurizing processes treated to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]						
649-079-00-9	Tail gas (petroleum), catalytic reformed naphtha fractionation stabilizer; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation stabilization of catalytic reformed naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	270-806-7	68478-26-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-080-00-4	Tail gas (petroleum), saturate gas plant mixed stream, C ₄ -rich; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation stabilization of straight-run naphtha, distillation tail gas and catalytic reformed naphtha stabilizer tail gas. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₆ , predominantly butane and isobutane.]	270-813-5	68478-32-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-081-00-X	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 stabilizer tail gas. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₁ through C ₅ , predominantly methane and ethane.]	270-814-0	68478-33-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-082-00-5	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 .]	270-815-6	68478-34-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-083-00-0	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 .]	270-990-9	68512-91-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-084-00-6	Gases (petroleum), full-range straight-run naphtha dehexanizer 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 .]	271-000-8	68513-15-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-085-00-1	Gases (petroleum), hydrocracking depropanizer 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.]	271-001-3	68513-16-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-086-00-7	Gases (petroleum), light straight-run naphtha stabilizer off; Petroleum gas; [A complex combination of	271-002-9	68513-17-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrocarbons obtained by the stabilization of light straight-run naphtha. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₆ .]						
649-087-00-2	Residues (petroleum), alkylation splitter, C ₄ -rich; Petroleum gas; [A complex residuum from the distillation of streams 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 (11°F to 82°F).]	271-010-2	68513-66-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-088-00-8	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 minus 164°C to minus 0.5°C (-263°F to 31°F).]	271-032-2	68514-31-8	F+; R12 Carc. Cat 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-089-00-3	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 (-263°F to 31°F).]	271-038-5	68514-36-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-090-00-9	Hydrocarbons, C ₁₋₃ ; Petroleum gas; [A complex combination of hydrocarbons having carbon numbers predominantly in the	271-259-7	68527-16-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	range of C ₁ through C ₃ and boiling in the range of approximately minus 164°C to minus 42°C (-263°F to -44°F).]						
649-091-00-4	Hydrocarbons, C ₁₋₄ , debutanizer fraction; Petroleum gas	271-261-8	68527-19-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-092-00-X	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 .]	271-624-0	68602-83-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-093-00-5	Hydrocarbons, C ₂₋₄ ; Petroleum gas	271-734-9	68606-25-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-094-00-0	Hydrocarbons, C ₃ ; Petroleum gas	271-735-4	68606-26-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-095-00-6	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 .]	271-737-5	68606-27-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-096-00-1	Gases (petroleum), depropanizer bottoms fractionation off; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation of depropanizer bottoms. It consists predominantly of butane, isobutane and butadiene.]	271-742-2	68606-34-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-097-00-7	Gases (petroleum), refinery blend; Petroleum gas; [A complex combination obtained from various processes. It consists of hydrogen, hydrogen	272-183-7	68783-07-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	sulfide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]						
649-098-00-2	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 .]	272-203-4	68783-64-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-099-00-8	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 (-60°F to -30°F).]	272-205-5	68783-65-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-100-00-1	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 .]	272-871-7	68918-99-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-101-00-7	Gases (petroleum), dehexanizer 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	272-872-2	68919-00-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	through C ₅ .]						
649-102-00-2	Gases (petroleum), light straight run gasoline fractionation stabilizer 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 .]	272-878-5	68919-05-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-103-00-8	Gases (petroleum), naphtha unfiner desulfurization stripper off; Petroleum gas; [A complex combination of hydrocarbons produced by a naphtha unfiner desulfurization 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 .]	272-879-0	68919-06-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-104-00-3	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.]	272-882-7	68919-09-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-105-00-9	Gases (petroleum), fluidized 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.]	272-893-7	68919-20-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-106-00-4	Gases (petroleum), straight-run stabilizer off; Petroleum gas; [A complex combination of hydrocarbons obtained from the	272-883-2	68919-10-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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 .]						
649-107-00-X	Gases (petroleum), catalytic cracked naphtha debutanizer; 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 .]	273-169-3	68952-76-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-108-00-5	Tail gas (petroleum), catalytic cracked distillate and naphtha stabilizer; 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 .]	273-170-9	68952-77-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-109-00-0	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 .]	273-175-6	68952-81-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-110-00-6	Tail gas (petroleum), thermal cracked hydrocarbon fractionation stabilizer, petroleum coking; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation stabilization of thermal cracked hydrocarbons	273-176-1	68952-82-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	from petroleum coking process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]						
649-111-00-1	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 .]	273-265-5	68955-28-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-112-00-7	Gases (petroleum), straight-run naphtha catalytic reformer stabilizer 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 .]	273-270-2	68955-34-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-113-00-2	Hydrocarbons, C ₄ ; Petroleum gas	289-339-5	87741-01-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-114-00-8	Alkanes, C ₁₋₄ , C ₃ -rich; Petroleum gas	292-456-4	90622-55-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-115-00-3	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 (-94°F to 32°F).]	295-404-9	92045-22-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-116-00-9	Hydrocarbons, C ₄ , steam-cracker distillate;	295-405-4	92045-23-3	F+; R12 Carc. Cat. 1; R45	F+; T R: 45-46-12		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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 minus 12°C to 5°C (10.4°F to 41°F).]			Muta. Cat. 2; R46	S: 53-45		
649-117-00-4	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 oxidize mercaptans or to remove acidic impurities. It consists predominantly of C ₄ saturated and unsaturated hydrocarbons.]	295-463-0	92045-80-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		HKS
649-118-00-X	Hydrocarbons, C ₄ , 1,3-butadiene- and isobutene-free; Petroleum gas	306-004-1	95465-89-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-119-00-5	Raffinates (petroleum), steam-cracked C ₄ fraction cuprous ammonium acetate extn., C ₃₋₅ and C ₃₋₅ unsatd., butadiene-free; Petroleum gas	307-769-4	97722-19-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-120-00-0	Gases (petroleum), amine system feed; Refinery gas; [The feed gas to the amine system for removal of hydrogen sulfide. It consists 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.]	270-746-1	68477-65-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-121-00-6	Gases (petroleum), benzene unit hydrodesulfurizer off; Refinery gas;	270-747-7	68477-66-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[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.]						
649-122-00-1	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 .]	270-748-2	68477-67-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-123-00-7	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 .]	270-749-8	68477-68-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-124-00-2	Gases (petroleum), catalytic reformed naphtha stripper overheads; Refinery gas; [A complex combination of hydrocarbons obtained from stabilization of catalytic reformed naphtha. Its consists of hydrogen and saturated hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	270-759-2	68477-77-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-125-00-8	Gases (petroleum), C ₆₋₈ catalytic reformer recycle; Refinery gas; [A complex combination of hydrocarbons produced by distillation of products from	270-761-3	68477-80-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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 .]						
649-126-00-3	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 ₅ and hydrogen.]	270-762-9	68477-81-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-127-00-9	Gases (petroleum), C ₆₋₈ catalytic reformer recycle, hydrogen-rich; Refinery gas	270-763-4	68477-82-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-128-00-4	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.]	270-766-0	68477-84-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-129-00-X	Gases (petroleum), dry sour, gas-concn.-unit-off; Refinery gas; [The complex combination of dry gases from a gas concentration unit. It consists of hydrogen, hydrogen sulfide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .]	270-774-4	68477-92-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-130-00-5	Gases (petroleum), gas concn. reabsorber distn.; 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 sulfide and hydrocarbons having carbon numbers in the range of C ₁ through C ₃ .]	270-776-5	68477-93-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-131-00-0	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.]	270-779-1	68477-96-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-132-00-6	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.]	270-780-7	68477-97-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-133-00-1	Gases (petroleum), hydrotreater blend oil recycle, hydrogen-nitrogen-rich; Refinery gas; [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 C ₁ through C ₅ .]	270-781-2	68477-98-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-134-00-7	Gases (petroleum), recycle,	270-783-3	68478-00-2	F+; R12	F+; T		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrogen-rich; Refinery gas; [A complex combination obtained from recycled reactor gases. It consists primarily of hydrogen with various small amounts of carbon monoxide, carbon dioxide, nitrogen, hydrogen sulfide, and saturated aliphatic hydrocarbons having carbon numbers in the range of C ₁ through C ₅ .]			Carc. Cat. 1; R45 Muta. Cat. 2; R46	R: 45-46-12 S: 53-45		
649-135-00-2	Gases (petroleum), reformer make-up, hydrogen-rich; Refinery gas; [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 C ₁ through C ₅ .]	270-784-9	68478-01-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-136-00-8	Gases (petroleum), reforming hydrotreater; Refinery gas; [A complex combination obtained from the reforming hydrotreating process. It consists primarily of hydrogen, methane, and ethane with various small amounts of hydrogen sulfide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₅ .]	270-785-4	68478-02-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-137-00-3	Gases (petroleum), reforming hydrotreater, hydrogen-methane-rich; Refinery gas; [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 C ₂ through C ₅ .]	270-787-5	68478-03-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-138-00-9	Gases (petroleum), reforming hydrotreater make-up, hydrogen-rich; Refinery gas; [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 C ₁ through C ₅ .]	270-788-0	68478-04-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-139-00-4	Gases (petroleum), thermal cracking distn.; Refinery gas; [A complex combination produced by distillation of products from a thermal cracking process. It consists of hydrogen, hydrogen sulfide, carbon monoxide, carbon dioxide and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]	270-789-6	68478-05-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-140-00-X	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 ₃ .]	270-805-1	68478-25-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-141-00-5	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 .]	270-807-2	68478-27-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-142-00-0	Tail gas (petroleum), catalytic reformed naphtha stabilizer; Refinery gas; [A complex combination of	270-808-8	68478-28-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrocarbons obtained from the stabilization of catalytic reformed naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]						
649-143-00-6	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 .]	270-809-3	68478-29-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-144-00-1	Tail gas (petroleum), hydrodesulfurized straight-run naphtha separator; Refinery gas; [A complex combination of hydrocarbons obtained from hydrodesulfurization 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 .]	270-810-9	68478-30-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-145-00-7	Gases (petroleum), catalytic reformed straight-run naphtha stabilizer 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.]	270-999-8	68513-14-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-146-00-2	Gases (petroleum), reformer effluent high-pressure flash drum off; Refinery gas; [A complex combination produced by the high-pressure flashing of the effluent from the reforming reactor. It consists primarily of hydrogen with	271-003-4	68513-18-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	various small amounts of methane, ethane, and propane.]						
649-147-00-8	Gases (petroleum), reformer effluent low-pressure flash drum off; Refinery gas; [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.]	271-005-5	68513-19-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-148-00-3	Gases (petroleum), oil refinery gas distn. off; Refinery gas; [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 C ₁ through C ₆ or obtained by cracking ethane and propane. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₂ , hydrogen, nitrogen, and carbon monoxide.]	271-258-1	68527-15-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-149-00-9	Gases (petroleum), benzene unit hydrotreater depentanizer overheads; Refinery gas; [A complex combination produced by treating the feed from the benzene unit with hydrogen in the presence of a catalyst followed by depentanizing. 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 C ₁ through C ₆ . It may contain trace amounts of benzene.]	271-623-5	68602-82-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-150-00-4	Gases (petroleum), secondary absorber off, fluidized catalytic	271-625-6	68602-84-6	F+; R12 Carc. Cat. 1; R45	F+; T R: 45-46-12		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	cracker overheads fractionator; Refinery gas; [A complex combination produced by the fractionation of the overhead products from the catalytic cracking process in the fluidized catalytic cracker. It consists of hydrogen, nitrogen, and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .]			Muta. Cat. 2; R46	S: 53-45		
649-151-00-X	Petroleum products, refinery gases; Refinery gas; [A complex combination which consists primarily of hydrogen with various small amounts of methane, ethane, and propane.]	271-750-6	68607-11-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-152-00-5	Gases (petroleum), hydrocracking low-pressure separator; Refinery gas; [A complex combination obtained by the liquid-vapor separation of the hydrocracking process reactor effluent. It consists predominantly of hydrogen and saturated hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .]	272-182-1	68783-06-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-153-00-0	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 .]	272-338-9	68814-67-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-154-00-6	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 .]	272-343-6	68814-90-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-155-00-1	Gases (petroleum), hydrotreated sour kerosine depentanizer stabilizer off; Refinery gas; [The complex combination obtained from the depentanizer stabilization of hydrotreated kerosine. It consists primarily of hydrogen, methane, ethane, and propane with various small amounts of nitrogen, hydrogen sulfide, carbon monoxide and hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₅ .]	272-775-5	68911-58-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-156-00-7	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 hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₅ .]	272-776-0	68911-59-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-157-00-2	Gases (petroleum), distillate unifier desulfurization stripper off; Refinery gas; [A complex combination stripped from the liquid product of the unifier desulfurization process. It consists of hydrogen sulfide, methane, ethane, and propane.]	272-873-8	68919-01-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-158-00-8	Gases (petroleum), fluidized catalytic cracker fractionation off; Refinery gas; [A complex combination produced by the fractionation of the overhead product of the fluidized catalytic cracking process. It consists of hydrogen, hydrogen sulfide, nitrogen, and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]	272-874-3	68919-02-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-159-00-3	Gases (petroleum), fluidized catalytic cracker scrubbing secondary absorber off; Refinery gas; [A complex combination produced by scrubbing the overhead gas from the fluidized catalytic cracker. It consists of hydrogen, nitrogen, methane, ethane and propane.]	272-875-9	68919-03-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-160-00-9	Gases (petroleum), heavy distillate hydrotreater desulfurization stripper off; Refinery gas; [A complex combination stripped from the liquid product of the heavy distillate hydrotreater desulfurization process. It consists of hydrogen, hydrogen sulfide, and saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]	272-876-4	68919-04-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-161-00-4	Gases (petroleum), platformer stabilizer 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.]	272-880-6	68919-07-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-162-00-X	Gases (petroleum), preflash tower off, crude distn.; 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 .]	272-881-1	68919-08-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-163-00-5	Gases (petroleum), tar stripper off; Refinery gas; [A complex combination obtained by the fractionation of reduced crude oil. It consists of	272-884-8	68919-11-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]						
649-164-00-0	Gases (petroleum), unfiner stripper off; Refinery gas; [A combination of hydrogen and methane obtained by fractionation of the products from the unfiner unit.]	272-885-3	68919-12-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-165-00-6	Tail gas (petroleum), catalytic hydrodesulfurized naphtha separator; Refinery gas; [A complex combination of hydrocarbons obtained from the hydrodesulfurization of naphtha. It consists of hydrogen, methane, ethane, and propane.]	273-173-5	68952-79-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-166-00-1	Tail gas (petroleum), straight-run naphtha hydrodesulfurizer; Refinery gas; [A complex combination obtained from the hydrodesulfurization of straight-run naphtha. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]	273-174-0	68952-80-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-167-00-7	Gases (petroleum), sponge absorber off, fluidized catalytic cracker and gas oil desulfurizer overhead fractionation; Refinery gas; [A complex combination obtained by the fractionation of products from the fluidized catalytic cracker and gas oil desulfurizer. It consists of hydrogen and hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	273-269-7	68955-33-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-168-00-2	Gases (petroleum), crude distn. and catalytic cracking; Refinery gas; [A complex combination	273-563-5	68989-88-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	produced by crude distillation and catalytic cracking processes. It consists of hydrogen, hydrogen sulfide, nitrogen, carbon monoxide and paraffinic and olefinic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]						
649-169-00-8	Gases (petroleum), gas oil diethanolamine scrubber off; Refinery gas; [A complex combination produced by desulfurization of gas oils with diethanolamine. It consists predominantly of hydrogen sulfide, hydrogen and aliphatic hydrocarbons having carbon numbers in the range of C ₁ through C ₅ .]	295-397-2	92045-15-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-170-00-3	Gases (petroleum), gas oil hydrodesulfurization 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 sulfide and aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₃ .]	295-398-8	92045-16-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-171-00-9	Gases (petroleum), gas oil hydrodesulfurization 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 .]	295-399-3	92045-17-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-172-00-4	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	295-400-7	92045-18-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]						
649-173-00-X	Gases (petroleum), naphtha steam cracking high-pressure residual; Refinery gas; [A complex combination obtained as a reaction mass 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 ₅ with which natural gas may also be mixed.]	295-401-2	92045-19-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-174-00-5	Gases (petroleum), residue visbaking off; Refinery gas; [A complex combination obtained from viscosity reduction of residues in a furnace. It consists predominantly of hydrogen sulfide and paraffinic and olefinic hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]	295-402-8	92045-20-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-177-00-1	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 (-60°F to 30°F.)]	268-629-5	68131-75-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-178-00-7	Tail gas (petroleum), catalytic cracked distillate and catalytic cracked naphtha fractionation absorber; Petroleum gas;	269-617-2	68307-98-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[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 C ₁ through C ₄ .]						
649-179-00-2	Tail gas (petroleum), catalytic polymn. naphtha fractionation stabilizer; Petroleum gas; [A complex combination of hydrocarbons from the fractionation stabilization products from polymerization of naphtha. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₁ through C ₄ .]	269-618-8	68307-99-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-180-00-8	Tail gas (petroleum), catalytic reformed naphtha fractionation stabilizer, hydrogen sulfide-free; Petroleum gas; [A complex combination of hydrocarbons obtained from fractionation stabilization of catalytic reformed naphtha and from which hydrogen sulfide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	269-619-3	68308-00-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-181-00-3	Tail gas (petroleum), cracked distillate hydrotreater stripper; Petroleum gas; [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 C ₁ through C ₆ .]	269-620-9	68308-01-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-182-00-9	Tail gas (petroleum), straight-run distillate hydrodesulfurizer, hydrogen sulfide-free;	269-630-3	68308-10-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	Petroleum gas; [A complex combination of hydrocarbons obtained from catalytic hydrodesulfurization of straight run distillates and from which hydrogen sulfide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]						
649-183-00-4	Tail gas (petroleum), gas oil catalytic cracking absorber; Petroleum gas; [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 C ₁ through C ₅ .]	269-623-5	68308-03-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-184-00-X	Tail gas (petroleum), gas recovery plant; Petroleum gas; [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 C ₁ through C ₅ .]	269-624-0	68308-04-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-185-00-5	Tail gas (petroleum), gas recovery plant deethanizer; Petroleum gas; [A complex combination of hydrocarbons from the distillation of products from miscellaneous hydrocarbon streams. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	269-625-6	68308-05-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-186-00-0	Tail gas (petroleum), hydrodesulfurized distillate and hydrodesulfurized naphtha fractionator, acid-free; Petroleum gas; [A complex combination of hydrocarbons obtained from	269-626-1	68308-06-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	fractionation of hydrodesulfurized 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 .]						
649-187-00-6	Tail gas (petroleum), hydrodesulfurized vacuum gas oil stripper, hydrogen sulfide-free; Petroleum gas; [A complex combination of hydrocarbons obtained from stripping stabilization of catalytic hydrodesulfurized vacuum gas oil and from which hydrogen sulfide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]	269-627-7	68308-07-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-188-00-1	Tail gas (petroleum), light straight-run naphtha stabilizer, hydrogen sulfide-free; Petroleum gas; [A complex combination of hydrocarbons obtained from fractionation stabilization of light straight run naphtha and from which hydrogen sulfide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₅ .]	269-629-8	68308-09-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-189-00-7	Tail gas (petroleum), propane-propylene alkylation feed prep deethanizer; 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 .]	269-631-9	68308-11-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-190-00-2	Tail gas (petroleum), vacuum gas oil hydrodesulfurizer, hydrogen sulfide-free; Petroleum gas; [A complex combination of hydrocarbons obtained from catalytic hydrodesulfurization of vacuum gas oil and from which hydrogen sulfide has been removed by amine treatment. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₆ .]	269-632-4	68308-12-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-191-00-8	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 (-54°F to 90°F).]	270-071-2	68409-99-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-193-00-9	Alkanes, C ₁₋₂ ; Petroleum gas	270-651-5	68475-57-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-194-00-4	Alkanes, C _{2,3} ; Petroleum gas	270-652-0	68475-58-1	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-195-00-X	Alkanes, C _{3,4} ; petroleum gas	270-653-6	68475-59-2	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-196-00-5	Alkanes, C _{4,5} ; Petroleum gas	270-654-1	68475-60-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-197-00-0	Fuel gases; Petroleum gas; [A combination of light gases. It consists predominantly of hydrogen and/or low molecular weight hydrocarbons.]	270-667-2	68476-26-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-198-00-6	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 (-423°F to 10°F).]	270-670-9	68476-29-9	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-199-00-1	Hydrocarbons, C _{3,4} ; Petroleum gas	270-681-9	68476-40-4	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-200-00-5	Hydrocarbons, C _{4,5} ; Petroleum gas	270-682-4	68476-42-6	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-201-00-0	Hydrocarbons, C _{2,4} , C ₃ -rich; Petroleum gas	270-689-2	68476-49-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-202-00-6	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 (-40 °F to 176 °F).]	270-704-2	68476-85-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		HKS
649-203-00-1	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 (-	270-705-8	68476-86-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		HKS

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	40 °F to 176 °F.)]						
649-204-00-7	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.]	270-724-1	68477-33-8	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-205-00-2	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 piperylenes.]	270-726-2	68477-35-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-206-00-8	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 .]	270-750-3	68477-69-0	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-207-00-3	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.]	270-751-9	68477-70-3	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-208-00-9	Gases (petroleum), catalytic-	270-752-4	68477-71-4	F+; R12	F+; T		H K

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	cracked gas oil depropanizer 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 sulfide and other acidic components. It consists of hydrocarbons having carbon numbers in the range of C ₃ through C ₅ , predominantly C ₄ .]			Carc. Cat. 1; R45 Muta. Cat. 2; R46	R: 45-46-12 S: 53-45		
649-209-00-4	Gases (petroleum), catalytic-cracked naphtha debutanizer bottoms, C ₃₋₅ -rich; Petroleum gas; [A complex combination of hydrocarbons obtained from the stabilization of catalytic cracked naphtha. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₅ .]	270-754-5	68477-72-5	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-210-00-X	Tail gas (petroleum), isomerized naphtha fractionation stabilizer; Petroleum gas; [A complex combination of hydrocarbons obtained from the fractionation stabilization products from isomerized naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₁ through C ₄ .]	269-628-2	68308-08-7	F+; R12 Carc. Cat. 1; R45 Muta. Cat. 2; R46	F+; T R: 45-46-12 S: 53-45		H K
649-261-00-8	Gasoline, natural; Low boiling point naphtha; [A complex combination of hydrocarbons separated from natural gas by processes such as refrigeration or absorption. It consists predominantly of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₈ and boiling in the range of approximately minus 20°C to 120°C (-4°F to 248°F).]	232-349-1	8006-61-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		HP
649-262-00-3	Naphtha;	232-443-2	8030-30-6	Carc. Cat. 2; R45	T		HP

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	Low boiling point naphtha; [Refined, partly refined, or unrefined petroleum products produced by the distillation of natural gas. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₆ and boiling in the range of approximately 100°C to 200°C (212°F to 392°F).]			Muta. Cat. 2; R46 Xn; R65	R: 45-46-65 S: 53-45		
649-263-00-9	Ligroine; Low boiling point naphtha; [A complex combination of hydrocarbons obtained by the fractional distillation of petroleum. This fraction boils in a range of approximately 20°C to 135°C (58°F to 275°F).]	232-453-7	8032-32-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-264-00-4	Naphtha (petroleum), heavy straight-run; Low boiling point naphtha; [A complex combination of hydrocarbons produced by distillation of crude oil. 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 (149°F to 446°F).]	265-041-0	64741-41-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-265-00-X	Naphtha (petroleum), full-range straight-run; Low boiling point naphtha; [A complex combination of hydrocarbons produced by distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately -20°C to 220°C (-4°F to 428°F).]	265-042-6	64741-42-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-266-00-5	Naphtha (petroleum), light straight-run; Low boiling point naphtha; [A complex combination of hydrocarbons produced by distillation of crude oil. It consists predominantly of	265-046-8	64741-46-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₀ and boiling in the range of approximately -20°C to 180°C (-4°F to 356°F).]						
649-267-00-0	Solvent naphtha (petroleum), light aliph.; Low boiling point naphtha; [A complex combination of hydrocarbons obtained from the distillation of crude oil or natural gasoline. It consists predominantly of saturated hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₁₀ and boiling in the range of approximately 35°C to 160°C (95°F to 320°F).]	265-192-2	64742-89-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-268-00-6	Distillates (petroleum), straight-run light; Low boiling point naphtha; [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 ₂ through C ₇ and boiling in the range of approximately -88°C to 99°C (-127°F to 210°F).]	270-077-5	68410-05-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-269-00-1	Gasoline, vapor-recovery; Low boiling point naphtha; [A complex combination of hydrocarbons separated from the gases from vapor recovery systems by cooling. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately -20°C to 196°C(-4°F to 384°F).]	271-025-4	68514-15-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-270-00-7	Gasoline, straight-run, topping-plant; Low boiling point naphtha; [A complex combination of hydrocarbons produced from the topping plant by the distillation of	271-727-0	68606-11-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	crude oil. It boils in the range of approximately 36.1°C to 193.3°C (97°F to 380°F).]						
649-271-00-2	Naphtha (petroleum), unsweetened; Low boiling point naphtha; [A complex combination of hydrocarbons produced from the distillation of naphtha streams from various refinery processes. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₁₂ and boiling in the range of approximately 0°C to 230°C (25°F to 446°F).]	272-186-3	68783-12-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-272-00-8	Distillates (petroleum), light straight-run gasoline fractionation stabilizer overheads; Low boiling point naphtha; [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 ₃ through C ₆ .]	272-931-2	68921-08-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-273-00-3	Naphtha (petroleum), heavy straight run, arom.-contg.; Low boiling point naphtha; [A complex combination of hydrocarbons obtained from a distillation process of crude petroleum. 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).]	309-945-6	101631-20-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-274-00-9	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	265-066-7	64741-64-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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°F).]						
649-275-00-4	Naphtha (petroleum), heavy 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 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°C to 220°C (302°F to 428°F).]	265-067-2	64741-65-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-276-00-X	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 C ₇ through C ₁₀ and boiling in the range of approximately 90°C to 160°C (194°F to 320°F).]	265-068-8	64741-66-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-277-00-5	Naphtha (petroleum), isomerization; Low boiling point modified	265-073-5	64741-70-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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-dimethylbutane, 2-methylpentane, and 3-methylpentane.]						
649-278-00-0	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 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).]	265-086-6	64741-84-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-279-00-6	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).]	265-095-5	64741-92-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-280-00-1	Raffinates (petroleum), catalytic reformer ethylene glycol-water countercurrent exts.; Low boiling point modified naphtha; [A complex combination of hydrocarbons obtained as the raffinate from the UDEX extraction process on the catalytic	270-088-5	68410-71-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	reformer stream. It consists of saturated hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₉ .]						
649-281-00-7	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 .]	270-349-3	68425-35-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-282-00-2	Naphtha (petroleum), full-range alkylate, butane-contg.; 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°C to 200°C (95°F to 428°F).]	271-267-0	68527-27-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-283-00-8	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 hydrotreated light distillate from steam-cracked naphtha.]	295-315-5	91995-53-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-284-00-3	Naphtha (petroleum), C ₄₋₁₂ , butane-alkylate, isoctane-rich; Low boiling point modified	295-430-0	92045-49-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-285-00-9	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. It consists predominantly of saturated hydrocarbons boiling in the range of approximately 94°C to 99°C (201°F to 210°F).]	295-436-3	92045-55-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-286-00-4	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).]	295-440-5	92045-58-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-287-00-X	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 hydrocarbon cut that was distillatively obtained from prehydrogenated cracked naphtha. It consists predominantly of paraffinic and	295-446-8	92045-64-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-288-00-5	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).]	309-871-4	101316-67-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		HP
649-289-00-0	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.]	265-055-7	64741-54-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		HP
649-290-00-6	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 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	265-056-2	64741-55-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		HP

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	relatively large proportion of unsaturated hydrocarbons.]						
649-291-00-1	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).]	270-686-6	68476-46-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-292-00-7	Naphtha (petroleum), catalytic cracked light distd.; 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 in the range of C ₁ through C ₅ .]	272-185-8	68783-09-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-293-00-2	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.]	295-311-3	91995-50-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-294-00-8	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 or to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers	295-431-6	92045-50-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-295-00-3	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).]	295-441-0	92045-59-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-296-00-9	Hydrocarbons, C ₈₋₁₂ , catalytic-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).]	295-794-0	92128-94-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-297-00-4	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 C ₈ through C ₁₂ and boiling in the range of approximately 140°C to 210°C (284°F to 410°F).]	309-974-4	101794-97-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-298-00-X	Hydrocarbons, C ₈₋₁₂ , catalytic	309-987-5	101896-28-0	Carc. Cat. 2; R45	T		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	cracking, chem. neutralized, sweetened; Low boiling point cat-cracked naphtha			Muta. Cat. 2; R46 Xn; R65	R: 45-46-65 S: 53-45		
649-299-00-5	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 may contain 10 vol. % or more benzene.]	265-065-1	64741-63-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-300-00-9	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).]	265-070-9	64741-68-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-301-00-4	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 process. It consists predominantly of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₆ and	270-660-4	68475-79-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	boiling in the range of approximately -49°C to 63°C (-57°F to 145°F).]						
649-302-00-X	Hydrocarbons, C ₂₋₆ , C ₆₋₈ catalytic reformer; Low boiling point cat-reformed naphtha	270-687-1	68476-47-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-303-00-5	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 .]	270-794-3	68478-15-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-304-00-0	Naphtha (petroleum), light catalytic reformed, arom.-free; Low boiling point cat-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.]	270-993-5	68513-03-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-305-00-6	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 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 .]	271-008-1	68513-63-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-306-00-1	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).]	271-058-4	68514-79-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-307-00-7	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 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).]	272-895-8	68919-37-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-308-00-2	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.]	273-271-8	68955-35-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-309-00-8	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	285-509-8	85116-58-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-310-00-3	Aromatic hydrocarbons, C ₈ , catalytic reforming-derived; Low boiling point cat-reformed naphtha	295-279-0	91995-18-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-311-00-9	Aromatic hydrocarbons, C ₇₋₁₂ , C ₈ -rich; Low boiling point cat-reformed naphtha; [A complex combination of 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).]	297-401-8	93571-75-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-312-00-4	Gasoline, C ₅₋₁₁ , high-octane stabilised 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 C ₅ through C ₁₁ and boiling in the range of approximately 45°C to 185°C (113°F to 365°F).]	297-458-9	93572-29-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-313-00-X	Hydrocarbons, C ₇₋₁₂ , C ₉ -arom.-rich, reforming heavy fraction; Low boiling point cat-reformed naphtha;	297-465-7	93572-35-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[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.]						
649-314-00-5	Hydrocarbons, C ₅₋₁₁ , nonaromatic, rich, reforming light 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 ₅ through C ₁₁ and boiling in the range of approximately 35°C to 125°C (94°F to 257°F), benzene and toluene.]	297-466-2	93572-36-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-316-00-6	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 (14 °F to 266 °F).]	265-075-6	64741-74-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-317-00-1	Naphtha (petroleum), heavy thermal cracked; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons from distillation of the products from a thermal	265-085-0	64741-83-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-318-00-7	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 hydrocarbons with some unsaturated aliphatic hydrocarbons having carbon number predominantly of C ₅ . This stream may contain benzene.]	267-563-4	67891-79-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-319-00-2	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	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-320-00-8	Distillates (petroleum), naphtha-raffinate pyrolyzate-derived, gasoline-blending; Low boiling point thermally cracked naphtha; [The complex combination of hydrocarbons obtained by the pyrolysis fractionation at 816°C (1500°F) of naphtha and raffinate. It consists	270-344-6	68425-29-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	predominantly of hydrocarbons having a carbon number of C ₉ and boiling at approximately 204°C (400°F).]						
649-321-00-3	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 (1500°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 benzene.]	270-658-3	68475-70-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-322-00-9	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).]	271-631-9	68603-00-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-323-00-4	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 dimerized C ₅ olefins and boiling in the range of approximately 33°C to 184°C (91°F to 363°F).]	271-632-4	68603-01-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-324-00-X	Distillates (petroleum), thermal cracked naphtha and gas oil, extractive;	271-634-5	68603-03-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	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).]						
649-325-00-5	Distillates (petroleum), light thermal cracked, debutanized arom.; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons produced by the distillation of products from a thermal cracking process. It consists predominantly of aromatic hydrocarbons, primarily benzene.]	273-266-0	68955-29-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-326-00-0	Naphtha (petroleum), light thermal cracked, sweetened; Low boiling point thermally cracked naphtha; [A complex combination of hydrocarbons obtained by subjecting a petroleum distillate from the high temperature thermal cracking of heavy oil fractions to a sweetening process to convert mercaptans. It consists predominantly of aromatics, olefins and saturated hydrocarbons boiling in the range of approximately 20°C to 100°C (68°F to 212°F).]	295-447-3	92045-65-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-327-00-6	Naphtha (petroleum), hydrotreated heavy; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of	265-150-3	64742-48-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₁₃ and boiling in the range of approximately 65°C to 230°C (149°F to 446°F).]						
649-328-00-1	Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F).]	265-151-9	64742-49-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-329-00-7	Naphtha (petroleum), hydrodesulfurized light; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained from a catalytic hydrodesulfurization process. It consists of hydrocarbons having carbon numbers predominantly 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).]	265-178-6	64742-73-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-330-00-2	Naphtha (petroleum), hydrodesulfurized heavy; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained from a catalytic hydrodesulfurization process. It consists of 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).]	265-185-4	64742-82-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-331-00-8	Distillates (petroleum),	270-092-7	68410-96-8	Carc. Cat. 2; R45	T		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrotreated middle, intermediate boiling; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by the distillation of products from a middle distillate hydrotreating process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₁₀ and boiling in the range of approximately 127°C to 188°C (262°F to 370°F).]			Muta. Cat. 2; R46 Xn; R65	R: 45-46-65 S: 53-45		
649-332-00-3	Distillates (petroleum), light distillate hydrotreating process, low-boiling; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by the distillation of products from the light distillate hydrotreating process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₉ and boiling in the range of approximately 3°C to 194°C (37°F to 382°F).]	270-093-2	68410-97-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-333-00-9	Distillates (petroleum), hydrotreated heavy naphtha, deisohexanizer overheads; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by distillation of the products from a heavy naphtha hydrotreating process. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₃ through C ₆ and boiling in the range of approximately -49°C to 68°C (-57°F to 155°F).]	270-094-8	68410-98-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-334-00-4	Solvent naphtha (petroleum), light arom., hydrotreated; Low boiling point hydrogen	270-988-8	68512-78-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	treated naphtha; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₈ through C ₁₀ and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]						
649-335-00-X	Naphtha (petroleum), hydrodesulfurized thermal cracked light; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by fractionation of hydrodesulfurized thermal cracker distillate. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₅ to C ₁₁ and boiling in the range of approximately 23°C to 195°C (73°F to 383°F).]	285-511-9	85116-60-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-336-00-5	Naphtha (petroleum), hydrotreated light, cycloalkane-contg.; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained from the distillation of a petroleum fraction. It consists predominantly of alkanes and cycloalkanes boiling in the range of approximately -20°C to 190°C (-4°F to 374°F).]	285-512-4	85116-61-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-337-00-0	Naphtha (petroleum), heavy steam-cracked, hydrogenated; Low boiling point hydrogen treated naphtha	295-432-1	92045-51-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-338-00-6	Naphtha (petroleum), hydrodesulfurized full-range; Low boiling point hydrogen treated naphtha;	295-433-7	92045-52-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[A complex combination of hydrocarbons obtained from a catalytic hydrodesulfurization process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately 30°C to 250°C (86°F to 482°F).]						
649-339-00-1	Naphtha (petroleum), hydrotreated light steam-cracked; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by treating a petroleum fraction, derived from a pyrolysis process, with hydrogen in the presence of a catalyst. It consists predominantly of unsaturated 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).]	295-438-4	92045-57-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-340-00-7	Hydrocarbons, C ₄₋₁₂ , naphtha-cracking, hydrotreated; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by distillation from the product of a naphtha steam cracking process and subsequent catalytic selective hydrogenation of gum formers. 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 230°C (86°F to 446°F).]	295-443-1	92045-61-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-341-00-2	Solvent naphtha (petroleum), hydrotreated light naphthenic; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with	295-529-9	92062-15-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrogen in the presence of a catalyst. It consists predominantly of cycloparaffinic hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₇ and boiling in the range of approximately 73°C to 85°C (163°F to 185°F).]						
649-342-00-8	Naphtha (petroleum), light steam-cracked, hydrogenated; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons produced from the separation and subsequent hydrogenation of the products of a steam-cracking process to produce ethylene. It consists predominantly of saturated and unsaturated paraffins, cyclic paraffins and cyclic aromatic hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₀ and boiling in the range of approximately 50°C to 200°C (122°F to 392°F). The proportion of benzene hydrocarbons may vary up to 30 wt. % and the stream may also contain small amounts of sulfur and oxygenated compounds.]	296-942-7	93165-55-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-343-00-3	Hydrocarbons, C ₆₋₁₁ , hydrotreated, dearomatized; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained as solvents which have been subjected to hydrotreatment in order to convert aromatics to naphthenes by catalytic hydrogenation.]	297-852-0	93763-33-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-344-00-9	Hydrocarbons, C ₉₋₁₂ , hydrotreated, dearomatized; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained as	297-853-6	93763-34-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	solvents which have been subjected to hydrotreatment in order to convert aromatics to naphthenes by catalytic hydrogenation.]						
649-345-00-4	Stoddard solvent; Low boiling point naphtha - unspecified; [A colorless, refined petroleum distillate that is free from rancid or objectionable odors and that boils in a range of approximately 148,8°C to 204,4°C. (300°F to 400°F).]	232-489-3	8052-41-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-346-00-X	Natural gas condensates (petroleum); Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons separated as a liquid from natural gas in a surface separator by retrograde condensation. It consists mainly of hydrocarbons having carbon numbers predominantly in the range of C ₂ to C ₂₀ . It is a liquid at atmospheric temperature and pressure.]	265-047-3	64741-47-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-347-00-5	Natural gas (petroleum), raw liq. mix; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons separated as a liquid from natural gas in a gas recycling plant by processes such as refrigeration or absorption. It consists mainly of saturated aliphatic hydrocarbons having carbon numbers in the range of C ₂ through C ₈ .]	265-048-9	64741-48-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-348-00-0	Naphtha (petroleum), light hydrocracked; Low boiling naphtha - unspecified; [A complex combination of hydrocarbons from distillation of the products from a hydrocracking process. It consists predominantly of	265-071-4	64741-69-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	saturated hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₀ , and boiling in the range of approximately -20°C to 180°C (-4°F to 356°F).]						
649-349-00-6	Naphtha (petroleum), heavy hydrocracked; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons from distillation of the products from a hydrocracking process. It consists predominantly of saturated 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).]	265-079-8	64741-78-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-350-00-1	Naphtha (petroleum), sweetened; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by subjecting a petroleum naphtha 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 ₄ through C ₁₂ and boiling in the range of approximately -10°C to 230°C (14°F to 446°F).]	265-089-2	64741-87-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-351-00-7	Naphtha (petroleum), acid-treated; Low boiling point naphtha - unspecified; [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 C ₇ through C ₁₂ and boiling in the range of approximately 90°C to 230°C (194°F to 446°F).]	265-115-2	64742-15-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
649-352-00-2	Naphtha (petroleum), chemically neutralized heavy; Low boiling point naphtha - unspecified; [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 C ₆ through C ₁₂ and boiling in the range of approximately 65°C to 230°C (149°F to 446°F).]	265-122-0	64742-22-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-353-00-8	Naphtha (petroleum), chemically neutralized light; Low boiling point naphtha - unspecified; [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 C ₄ through C ₁₁ and boiling in the range of approximately -20°C to 190°C (-4°F to 374°F).]	265-123-6	64742-23-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-354-00-3	Naphtha (petroleum), catalytic dewaxed; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from the catalytic dewaxing of a petroleum fraction. It consists predominantly of hydrocarbons 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).]	265-170-2	64742-66-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-355-00-9	Naphtha (petroleum), light steam-cracked; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the distillation of the products from a steam cracking process. It	265-187-5	64742-83-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F). This stream is likely to contain 10 vol. % or more benzene.]						
649-356-00-4	Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₈ through C ₁₀ and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	265-199-0	64742-95-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-357-00-X	Aromatic hydrocarbons, C ₆₋₁₀ , acid-treated, neutralized; Low boiling point naphtha - unspecified	268-618-5	68131-49-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-358-00-5	Distillates (petroleum), C _{3,5} , 2-methyl-2-butene-rich; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons from the distillation of hydrocarbons usually ranging in carbon numbers from C ₃ through C ₅ , predominantly isopentane and 3-methyl-1-butene. It consists of saturated and unsaturated hydrocarbons having carbon numbers in the range of C ₃ through C ₅ , predominantly 2-methyl-2-butene.]	270-725-7	68477-34-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-359-00-0	Distillates (petroleum), polyimd. steam-cracked petroleum distillates, C ₅₋₁₂ fraction; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from the	270-735-1	68477-50-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	distillation of polymerized steam-cracked petroleum distillate. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₁₂ .]						
649-360-00-6	Distillates (petroleum), steam-cracked, C ₅₋₁₂ fraction; Low boiling point naphtha - unspecified; [A complex combination of organic compounds obtained by the distillation of products from a steam cracking process. It consists of unsaturated hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₁₂ .]	270-736-7	68477-53-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-361-00-1	Distillates (petroleum), steam-cracked, C ₅₋₁₀ fraction, mixed with light steam-cracked petroleum naphtha C ₅ fraction; Low boiling point naphtha - unspecified	270-738-8	68477-55-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-362-00-7	Extracts (petroleum), cold-acid, C _{4,6} ; Low boiling point naphtha - unspecified; [A complex combination of organic compounds produced by cold acid unit extraction of saturated and unsaturated aliphatic hydrocarbons usually ranging in carbon numbers from C ₃ through C ₆ , predominantly pentanes and amylenes. It consists predominantly of saturated and unsaturated hydrocarbons having carbon numbers in the range of C ₄ through C ₆ , predominantly C ₅ .]	270-741-4	68477-61-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-363-00-2	Distillates (petroleum), depentanizer overheads; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from a catalytic cracked gas stream. It consists of aliphatic hydrocarbons having carbon numbers	270-771-8	68477-89-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	predominantly in the range of C ₄ through C ₆ .]						
649-364-00-8	Residues (petroleum), butane splitter bottoms; Low boiling point naphtha - unspecified; [A complex residuum from the distillation of butane stream. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₆ .]	270-791-7	68478-12-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-365-00-3	Residual oils (petroleum), deisobutanizer tower; Low boiling point naphtha - unspecified; [A complex residuum from the atmospheric distillation of the butane-butylene stream. It consists of aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₆ .]	270-795-9	68478-16-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-366-00-9	Naphtha (petroleum), full-range coker; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons produced by the distillation of products from a fluid coker. It consists predominantly of unsaturated hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₅ and boiling in the range of approximately 43°C to 250°C (110°F-500°F).]	270-991-4	68513-02-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-367-00-4	Naphtha (petroleum), steam-cracked middle arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons produced by the distillation of products from a steam-cracking process. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₇ through C ₁₂ and	271-138-9	68516-20-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	boiling in the range of approximately 130°C to 220°C (266°F to 428°F).]						
649-368-00-X	Naphtha (petroleum), clay-treated full-range straight-run; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons resulting from treatment of full-range straight-run naphtha with natural or modified clay, usually in a percolation process to remove the trace amounts of polar compounds and impurities present. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately -20°C to 220°C (-4°F to 429°F).]	271-262-3	68527-21-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-369-00-5	Naphtha (petroleum), clay-treated light straight-run; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons resulting from treatment of light straight-run naphtha with a natural or modified clay, usually in a percolation process to remove the trace amounts of polar compounds and impurities present. It consists of hydrocarbons having carbon numbers predominantly in the range of C ₇ through C ₁₀ and boiling in the range of approximately 93°C to 180°C (200°F to 356°F).]	271-263-9	68527-22-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-370-00-0	Naphtha (petroleum), light steam-cracked arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons produced by distillation of products from a steam-cracking process. It consists predominantly of	271-264-4	68527-23-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	aromatic hydrocarbons having carbon numbers predominantly in the range of C ₇ through C ₉ and boiling in the range of approximately 110°C to 165°C (230°F to 329°F).]						
649-371-00-6	Naphtha (petroleum), light steam-cracked, debenzenized; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons produced by distillation of products from a steam-cracking process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₂ and boiling in the range of approximately 80°C to 218°C (176°F to 424°F).]	271-266-5	68527-26-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-372-00-1	Naphtha (petroleum), arom.-contg.; Low boiling point naphtha - unspecified	271-635-0	68603-08-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-373-00-7	Gasoline, pyrolysis, debutanizer bottoms; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from the fractionation of depropanizer bottoms. It consists of hydrocarbons having carbon numbers predominantly greater than C ₅ .]	271-726-5	68606-10-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-374-00-2	Naphtha (petroleum), light, sweetened; Low boiling point naphtha - unspecified; [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 ₃ through C ₆ and	272-206-0	68783-66-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	boiling in the range of approximately -20°C to 100°C (-4°F to 212°F).]						
649-375-00-8	Natural gas condensates; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons separated and/or condensed from natural gas during transportation and collected at the wellhead and/or from the production, gathering, transmission, and distribution pipelines in deeps, scrubbers, etc. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₈ .]	272-896-3	68919-39-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-376-00-3	Distillates (petroleum), naphtha unfiner stripper; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons produced by stripping the products from the naphtha unfiner. It consists of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C ₂ through C ₆ .]	272-932-8	68921-09-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-377-00-9	Naphtha (petroleum), catalytic reformed light, arom.-free fraction; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons remaining after removal of aromatic compounds from catalytic reformed light naphtha in a selective absorption process. It consists predominantly of paraffinic and cyclic compounds having carbon numbers predominantly in the range of C ₅ to C ₈ and boiling in the range of approximately 66°C to 121°C (151°F to 250°F).]	285-510-3	85116-59-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-378-00-4	Gasoline; Low boiling point naphtha - unspecified;	289-220-8	86290-81-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	[A complex combination of hydrocarbons consisting primarily of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having carbon numbers predominantly greater than C ₃ and boiling in the range of 30°C to 260°C (86°F to 500°F).]						
649-379-00-X	Aromatic hydrocarbons, C ₇₋₈ , dealkylation products, distn. residues; Low boiling point naphtha - unspecified	292-698-0	90989-42-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-380-00-5	Hydrocarbons, C ₄₋₆ , depentanizer lights, arom. hydrotreater; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained as first runnings from the depentanizer column before hydrotreatment of the aromatic charges. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₆ , predominantly pentanes and pentenes, and boiling in the range of approximately 25°C to 40°C (77°F to 104°F).]	295-298-4	91995-38-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-381-00-0	Distillates (petroleum), heat-soaked steam-cracked naphtha, C ₅ -rich; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by distillation of heat-soaked steam-cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₄ through C ₆ , predominantly C ₅ .]	295-302-4	91995-41-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-382-00-6	Extracts (petroleum), catalytic reformed light naphtha solvent; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained as the	295-331-2	91995-68-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	extract from the solvent extraction of a catalytically reformed petroleum cut. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₇ through C ₈ and boiling in the range of approximately 100°C to 200°C (212°F to 392°F).]						
649-383-00-1	Naphtha (petroleum), hydrodesulfurized light, dearomatized; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by distillation of hydrodesulfurized and dearomatized light petroleum fractions. It consists predominantly of C ₇ paraffins and cycloparaffins boiling in a range of approximately 90°C to 100°C (194°F to 212°F).]	295-434-2	92045-53-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-384-00-7	Naphtha (petroleum), light, C ₅ -rich, sweetened; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by subjecting a petroleum naphtha 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 ₄ through C ₅ , predominantly C ₅ , and boiling in the range of approximately minus 10°C to 35°C (14°F to 95°F).]	295-442-6	92045-60-8	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-385-00-2	Hydrocarbons, C ₈₋₁₁ , naphtha-cracking, toluene cut; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by distillation from prehydrogenated cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers	295-444-7	92045-62-0	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	predominantly in the range of C ₈ through C ₁₁ and boiling in the range of approximately 130°C to 205°C (266°F to 401°F).]						
649-386-00-8	Hydrocarbons, C ₄₋₁₁ , naphtha-cracking, arom.-free; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from prehydrogenated cracked naphtha after distillative separation of benzene- and toluene-containing hydrocarbon cuts and a higher boiling fraction. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₄ through C ₁₁ and boiling in the range of approximately 30°C to 205°C (86°F to 401°F).]	295-445-2	92045-63-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-387-00-3	Naphtha (petroleum), light heat-soaked, steam-cracked; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the fractionation of steam cracked naphtha after recovery from a heat soaking process. It consists predominantly of hydrocarbons having a carbon number predominantly in the range of C ₄ through C ₆ and boiling in the range of approximately 0°C to 80°C (32°F to 176°F).]	296-028-8	92201-97-3	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-388-00-9	Distillates (petroleum), C ₆ -rich; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from the distillation of a petroleum feedstock. It consists predominantly of hydrocarbons having carbon numbers of C ₅ through C ₇ , rich in C ₆ , and boiling in the range of approximately 60°C to 70°C (140°F to 158°F).]	296-903-4	93165-19-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-389-00-4	Gasoline, pyrolysis, hydrogenated;	302-639-3	94114-03-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46	T R: 45-46-65		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	Low boiling point naphtha-unspecified; [A distillation fraction from the hydrogenation of pyrolysis gasoline boiling in the range of approximately 20°C to 200°C (68°F to 392°F).]			Xn; R65	S: 53-45		
649-390-00-X	Distillates (petroleum), steam-cracked, C ₈₋₁₂ fraction, polymd., distn. lights; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by distillation of the polymerized C ₈ through C ₁₂ fraction from steam-cracked petroleum distillates. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C ₈ through C ₁₂ .]	305-750-5	95009-23-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-391-00-5	Extracts (petroleum) heavy naphtha solvent, clay-treated; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the treatment of heavy naphthic solvent petroleum extract with bleaching earth. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₁₀ and boiling in the range of approximately 80°C to 180°C (175°F to 356°F).]	308-261-5	97926-43-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-392-00-0	Naphtha (petroleum), light steam-cracked, debenzenized, thermally treated; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the treatment and distillation of debenzenized light steam-cracked petroleum naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₇ through C ₁₂ and boiling in the	308-713-1	98219-46-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	range of approximately 95°C to 200°C (203°F to 392°F).]						
649-393-00-6	Naphtha (petroleum), light steam-cracked, thermally treated; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the treatment and distillation of light steam-cracked petroleum naphtha. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₅ through C ₆ and boiling in the range of approximately 35°C to 80°C (95°F to 176°F).]	308-714-7	98219-47-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-394-00-1	Distillates (petroleum), C ₇₋₉ , C ₈ -rich, hydrodesulfurized dearomatized; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the distillation of petroleum light fraction, hydrodesulfurized and dearomatized. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₇ through C ₉ , predominantly C ₈ paraffins and cycloparaffins, boiling in the range of approximately 120°C to 130°C (248°F to 266°F).]	309-862-5	101316-56-7	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-395-00-7	Hydrocarbons, C ₆₋₈ , hydrogenated sorption-dearomatized, toluene raffination; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained during the sorptions of toluene from a hydrocarbon fraction from cracked gasoline treated with hydrogen in the presence of a catalyst. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₆ through C ₈ and boiling in the	309-870-9	101316-66-9	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	range of approximately 80°C to 135°C (176°F to 275°F).]						
649-396-00-2	Naphtha (petroleum), hydrodesulfurised full-range coker; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by fractionation from hydrodesulfurised coker distillate. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C ₅ to C ₁₁ and boiling in the range of approximately 23°C to 196°C (73°F to 385°F).]	309-879-8	101316-76-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-397-00-8	Naphtha (petroleum), sweetened light; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by subjecting a petroleum naphtha to a sweetening process to convert mercaptans or to remove acidic impurities. 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 20°C to 130°C (68°F to 266°F).]	309-976-5	101795-01-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-398-00-3	Hydrocarbons, C ₃₋₆ , C ₅ -rich, steam-cracked naphtha; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by distillation of steam-cracked naphtha. It consists predominantly of hydrocarbons having carbon numbers in the range of C ₃ through C ₆ , predominantly C ₅ .]	310-012-0	102110-14-5	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-399-00-9	Hydrocarbons, C ₅ -rich, dicyclopentadiene-contg.; Low boiling point naphtha - unspecified; [A complex combination of	310-013-6	102110-15-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
	hydrocarbons obtained by distillation of the products from a steam-cracking process. It consists predominantly of hydrocarbons having carbon numbers of C ₅ and dicyclopentadiene and boiling in the range of approximately 30°C to 170°C (86°F to 338°F).]						
649-400-00-2	Residues (petroleum), steam-cracked light, arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained by the distillation of the products of steam cracking or similar processes after taking off the very light products resulting in a residue starting with hydrocarbons having carbon numbers greater than C ₅ . It consists predominantly of aromatic hydrocarbons having carbon numbers greater than C ₅ and boiling above approximately 40°C (104°F).]	310-057-6	102110-55-4	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-401-00-8	Hydrocarbons, C ₂₅ , C ₅₋₆ -rich; Low boiling point naphtha - unspecified	270-690-8	68476-50-6	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-402-00-3	Hydrocarbons, C ₅ -rich; Low boiling point naphtha - unspecified	270-695-5	68476-55-1	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
649-403-00-9	Aromatic hydrocarbons, C ₈₋₁₀ ; Low boiling point naphtha - unspecified	292-695-4	90989-39-2	Carc. Cat. 2; R45 Muta. Cat. 2; R46 Xn; R65	T R: 45-46-65 S: 53-45		H P
650-016-00-2	Mineral wool, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content greater than 18 % by weight]	-	-	Carc. Cat. 3 ; R40	Xn R: 40 S: (2-)36/37		AQR

Annex IV

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
650-017-00-8	Refractory Ceramic Fibres, Special Purpose Fibres, with the exception of those specified elsewhere in this Annex; [Man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18 % by weight]	-	-	Carc. Cat. 2; R49	T R: 49 S: 53-45		AR