

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part S

Ships Carrying Dangerous Chemicals in Bulk

Rules for the Survey and Construction of Steel Ships
Part S **2014 AMENDMENT NO.1**

Rule No.44 30th May 2014
Resolved by Technical Committee on 4th February 2014
Approved by Board of Directors on 24th February 2014

Rule No.44 30th May 2014

AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

“Rules for the survey and construction of steel ships” has been partly amended as follows:

Part S SHIPS CARRYING DANGEROUS CHEMICALS IN BULK

**Chapter 17 SUMMARY OF MINIMUM REQUIREMENTS
(with reference to *IBC Code* Chapter 17)**

17.1 General

Table S17.1 has been amended as follows.

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
“Acetic acid” to “Alcohols (C14-C18), primary, linear and essentially linear” are omitted.														
Alkanes (C6-C9)	X	P	2	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6
Iso-and cyclo-alkanes (C10-C11)	Y	P	3	2G	Cont	No	- T3	- IIA	No	R	F	A	No	15.19.6
Iso-and cyclo-alkanes (C12+)	Y	P	3	2G	Cont	No	- T3	- IIA	No	R	F	A	No	
Alkanes(C10-C26), linear and branched, (flashpoint>60°C)	Y	S/P	3	2G	Open	No	-	-	Yes	Q	No	AB C	No	15.19.6
n-Alkanes (C10+)	Y	P	3	2G	Cont	No	- T3	- IIA	No	R	F	A	No	15.19.6
“Alkaryl polyethers (C9-C20)” to “Alkenyl (C16-C20) succinic anhydride” are omitted.														
Alkyl acrylate-vinylpyridine copolymer in toluene	Y	P	2	2G	Cont	No	T4	IIB	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
“Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)” to “Alkylbenzene mixtures (containing at least 50% of toluene)” are omitted.														
Alkyl (C3-C4) benzenes	Y	P	2	2G	Cont	No	T4	IIA	No	R	F	A	No	15.19.6
“Alkyl (C5-C8) benzenes” to “Alkyl (C8-C40) phenol sulphide” are omitted.														
Alkyl (C8-C9) phenylamine in aromatic solvents	Y	P	2	2G	Cont	No	T4	IIB	No	R	F	A	No	15.19.6
“Alkyl (C9-C15) phenyl propoxylate” to “Alkyl (C12-C14) polyglucoside solution (55% or less)” are omitted.														
Alkyl (C12-C16) propoxyamine ethoxylate	X	S/P	2	2G	Cont	No	-	-	Yes	C	T	AC	Yes	15.12,15.17, 15.19 & 15.22.12 (15.19), 16.2.3-6. (16.2.6)
“Alkyl(C10-C20, saturated and unsaturated) phosphite” to “Alkyl (C18+) toluenes” are omitted.														
Alkyltoluenesulphonic acid, calcium salts	Y	S/P	2	2G	Cont	No	-	-	Yes	C	T	AB C	Yes	15.12, 15.17, 15.19 & 15.22.12 (15.19) 16.2.3-6. (16.2.6)
Alkyl(C18-C28)toluenesulfonic acid	Y	S/P	2	2G	Cont	No	-	-	Yes	C	T	AB C	Yes	15.11.2,15.11.3,15.11.4, 15.11.6,15.11.7,15.11.8, 15.12,15.17, 15.19 & 15.22.12 (15.19), 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
Alkyl(C18-C28)toluenesulfonic acid, calcium salts, borated	Y	S/P	3	2G	Cont	No	-	-	Yes	C	T	AB C	Yes	15.12,15.17, 15.19&15.22.12(15.19) 16.2.3-6. (16.2.6)

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60°C					
<u>Alkyl(C18-C28)toluenesulfonic acid, calcium salts, low overbase</u>	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.17,</u> <u>15.19&15.22.12(15.19),</u> <u>16.2.3-6.(16.2.6)</u>
<u>Alkyl(C18-C28)toluenesulfonic acid, calcium salts, high overbase</u>	<u>Y</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.17,</u> <u>15.19&15.22.12(15.19),</u> <u>16.2.3-6.(16.2.6)</u>
“Allyl alcohol” and “Allyl chloride” are omitted.														
<u>Aluminium chloride/Hydrogen chloride solution</u>	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>NF</u>	<u>C</u>	<u>T</u>	<u>No</u>	<u>Yes</u>	<u>15.11,15.12,15.17,</u> <u>15.19 & 15.22.12 (15.19)</u>
“Aluminium sulphate solution” to “Ammonia aqueous (28% or less)” are omitted.														
<u>Ammonium chloride solution (less than 25%) (*)</u>	<u>Z</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>NF</u>	<u>Q</u>	<u>No</u>	<u>No</u>	<u>No</u>	
“Ammonium hydrogen phosphate solution” to “Ammonium sulphate solution” are omitted.														
Ammonium sulphide solution (45% or less)	Y	S/P	2	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	C	F-T	A	Yes	15.12, 15.17, 15.19 & 15.22.12 (15.19), 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-3. (16.6.3)
“Ammonium thiosulphate solution (60% or less)” is omitted.														
Amyl acetate (all isomers)	Y	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
n-Amyl alcohol	Z	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	AB	No	
Amyl alcohol, primary	Z	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	AB	No	
sec-Amyl alcohol	Z	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	AB	No	
tert-Amyl alcohol	Z	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	A	No	
tert-Amyl methyl ether	X	P	2	2G	Cont	No	T2 <u>T2</u>	<u>IIB</u>	No	R	F	A	No	15.19.6
“Aniline” and “Aryl polyolefins (C11-C50)” are omitted.														
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95 - 120°C)	X	P	2	2G	Cont	No	<u>T4</u>	<u>IIA</u>	No	R	F	B	No	15.19.6
“Barium long chain (C11-C50) alkaryl sulphonate” to “Benzyl chloride” are omitted.														
<u>Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flashpoint>60°C(>25% but <99%</u>	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.12,15.17,15.19.6</u>

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
<u>by volume)</u>														
Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flashpoint ≤60°C (>25% but <99% by volume)	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.12,15.17,15.19.6</u>
Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.12,15.17,15.19.6</u>
Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.12,15.17,15.19.6</u>
Bio-fuel blends of Gasoline and Ethl alcohol (>25% but <99% by volume)	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>A</u>	<u>NO</u>	<u>15.12,15.17,15.19.6</u>
“Brake fluid base mix: Poly (2-8) alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters” to “Butene oligomer” are omitted.														
Butyl acetate (all isomers)	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Butyl acrylate (all isomers)” is omitted.														
tert-Butyl alcohol	<u>Z</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	
Butylamine (all isomers)	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F-T</u>	<u>A</u>	<u>Yes</u>	<u>15.12, 15.17, 15.19.6</u>
Butylbenzene (all isomers)	<u>X</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T4</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Butyl benzyl phthalate” is omitted.														
Butyl butyrate (all isomers)	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture” to “n-Butyl ether” are omitted.														
Butyl methacrylate	<u>Z</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F-T</u>	<u>AD</u>	<u>No</u>	<u>15.13, 15.19.6, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2)</u>
n-Butyl propionate	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Butyraldehyde (all isomers)” to “gamma-Butyrolactone” are omitted.														
Calcium alkaryl sulphonate(C11-C50)	<u>Z</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.17, 15.19 & 15.22.12 (15.19)</u>
“Calcium alkyl (C10-C28) salicylate” is omitted.														
Calcium carbonate slurry	<u>Z</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>			<u>Yes</u>	<u>C</u>	<u>No</u>	<u>AB</u>	<u>No</u>	
“Calcium hydroxide slurry” to “Calcium lignosulphonate solutions” are omitted.														

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Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
Calcium long-chain alkyl sulphonate (C11-C50)	Z	P	3	2G	Open	No	-	-	Yes	O	No	A	No	16.2.3-9. (16.2.9)
“Calcium long-chain alkyl(C5-C10) phenate” to “Carbon tetrachloride” are omitted.														
Cashew nut shell oil (untreated)	Y	S <u>S/P</u>	2	2G	Cont	No			Yes	R	T	AB	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
“Castor oil” is omitted.														
Cesium formate solution (*)	<u>Y</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>NF</u>	<u>O</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>15.19.6</u>
“Cetyl/Eicosyl methacrylate mixture” to “Chloroform” are omitted.														
Chlorohydrins (crude)	Y	S/P	2	2G	Cont	No	<u>T3</u>	IIA	No	C	F-T	A	No	15.12, 15.19 & 15.22.12(15.19)
“4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution” to “Chlorosulphonic acid” are omitted.														
m-Chlorotoluene	Y	S/P	2	2G	Cont	No	<u>T4</u>	IIA	No	R	F-T	AB	No	15.19.6
o-Chlorotoluene	Y	S/P	2	2G	Cont	No	<u>T1</u>	IIA	No	R	F-T	AB	No	15.19.6
p-Chlorotoluene	Y	S/P	2	2G	Cont	No	<u>T1</u>	IIA	No	R	F-T	AB	No	15.19.6, 16.2.3-9. (16.2.9)
Chlorotoluenes (mixed isomers)	Y	S/P	2	2G	Cont	No	<u>T4</u>	IIA	No	R	F-T	AB	No	15.19.6
“Choline chloride solutions” to “1,5,9-Cyclododecatriene” are omitted.														
Cycloheptane	X	P	2	2G	Cont	No	<u>T4</u>	IIA	No	R	F	A	No	15.19.6
Cyclohexane	Y	P	2	2G	Cont	No	<u>T3</u>	IIA	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
“Cyclohexanol” to “Cyclohexanone, Cyclohexanol mixture” are omitted.														
Cyclohexyl acetate	Y	P	3	2G	Cont	No	<u>T4</u>	IIA	No	R	F	A	No	15.19.6
“Cyclohexylamine” is omitted.														
1,3-Cyclopentadiene dimer (molten)	Y	P	2	2G	Cont	No	<u>T1</u>	IIIB	No	R	F	A	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
Cyclopentane	Y	P	2	2G	Cont	No	<u>T2</u>	IIA	No	R	F	A	No	15.19.6
Cyclopentene	Y	P	2	2G	Cont	No	<u>T2</u>	IIA	No	R	F	A	No	15.19.6
p-Cymene	Y	P	2	2G	Cont	No	<u>T2</u>	IIA	No	R	F	A	No	15.19.6
Decahydronaphthalene	Y	P	2	2G	Cont	No	<u>T3</u>	IIA	No	R	F	AB	No	15.19.6
“Decanoic acid” is omitted.														
Decene	X	P	2	2G	Cont	No	<u>T3</u>	IIA	No	R	F	A	No	15.19.6
“Decyl acrylate” to “Decyloxytetrahydrothiophene dioxide” are omitted.														
Diacetone alcohol	Z	P	3	2G	Cont	No	<u>T1</u>	IIA	No	R	F	A	No	

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Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
“Dialkyl (C8-C9) diphenylamines” to “Dialkyl (C9-C10) phthalates” are omitted.														
Dialkyl thiophosphates sodium salts solution	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>R</u>	<u>T</u>	<u>AC</u>	<u>No</u>	<u>15.12.3,15.12.4,15.19.6,16.2.3-9. (16.2.9)</u>
“Dibromomethane” to “Dibutyl phthalate” are omitted.														
Dibutyl terephthalate	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>O</u>	<u>No</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.19.6, 16.2.3-9. (16.2.9)</u>
“Dichlorobenzene (all isomers)” is omitted.														
3,4-Dichloro-1-butene	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12.3, 15.17, 15.19.6</u>
“1,1-Dichloroethane” and “Dichloroethyl ether” are omitted.														
1,6-Dichlorohexane	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>No/Yes</u>	<u>R</u>	<u>T</u>	<u>AB</u>	<u>No</u>	<u>15.19.6</u>
“2,2-Dichloroisopropyl ether” to “2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution” are omitted.														
1,1-Dichloropropane	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T4</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F-T</u>	<u>AB</u>	<u>No</u>	<u>15.12, 15.19.6</u>
“1,2-Dichloropropane” and “1,3-Dichloropropene” are omitted.														
Dichloropropene/Dichloropropane mixtures	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AB</u> <u>D</u>	<u>Yes</u>	<u>15.12, 15.17, 15.18, 15.19 & 15.22.12 (15.19)</u>
“2,2-Dichloropropionic acid” is omitted.														
Dicyclopentadiene, Resin Grade, 81-89%	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>Inert</u>	<u>T2</u>	<u>IIB</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.13,15.17, 15.19 & 15.22.12 (15.19)</u>
“Diethanolamine” to “2,6-Diethylaniline” are omitted.														
Diethylbenzene	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Diethylene glycol dibutyl ether” to “Dihexyl phthalate” are omitted.														
Diisobutylamine	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T4</u>	<u>IIB</u>	<u>No</u>	<u>R</u>	<u>F-T</u>	<u>AC</u> <u>D</u>	<u>No</u>	<u>15.12.3, 15.19.6</u>
Diisobutylene	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
Diisobutyl ketone	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	<u>15.19.6</u>
“Diisobutyl phthalate” to “Dimethylamine solution (45% or less)” are omitted.														
Dimethylamine solution (greater than 45% but not greater than 55%)	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIB</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AC</u> <u>D</u>	<u>Yes</u>	<u>15.12, 15.17, 15.19 & 15.22.12 (15.19)</u>
Dimethylamine solution (greater than 55% but not greater than 65%)	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIB</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AC</u> <u>D</u>	<u>Yes</u>	<u>15.12, 15.14 & 15.22.10 (15.14), 15.17, 15.19 & 15.22.12 (15.19)</u>

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60°C					
N,N-Dimethylcyclohexylamine	Y	S/P	2	2G	Cont	No	<u>T3</u>	<u>IIB</u>	No	R	F-T	AC	No	15.12, 15.17, 15.19.6
“Dimethyl disulphide” to “1,4-Dioxane” are omitted.														
Dipentene	Y	P	3	2G	Cont	No	<u>T3</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
“Diphenyl” to “Diphenylol propane-epichlorohydrin resins” are omitted.														
Di-n-propylamine	Y	S/P	2	2G	Cont	No	<u>T3</u>	<u>IIB</u>	No	R	F-T	A	No	15.12.3, 15.19.6
“Dipropylene glycol” to “Diundecyl phthalate” are omitted.														
Dodecane (all isomers)	Y	P	2	2G	Cont	No	<u>T3</u>	<u>IIA</u>	No	R	F	AB	No	15.19.6
“tert-Dodecanethiol” to “Dodecylamine/Tetradecylamine mixture” are omitted.														
Dodecylbenzene	Z	P	3	2G	Open	No	-	-	Yes	O	No	AB	No	
“Dodecyl diphenyl ether disulphonate solution” to “Dodecyl methacrylate” are omitted.														
Dodecyl/Octadecyl methacrylate mixture	Y	S/P	2	2G	Open	No	-	-	Yes	O	No	A	No	15.13, 15.19.6, 16.2.3-6. (16.2.6), 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2)
“Dodecyl/Pentadecyl methacrylate mixture” to “Drilling brines, including:calcium bromide solution, calcium chloride solution and sodium chloride solution” are omitted.														
Epichlorohydrin	Y	S/P	2	2G	Cont	No	<u>T2</u>	<u>IIB</u>	No	C	F-T	A	Yes	15.12, 15.17, 15.19 & 15.22.12 (15.19)
“Ethanolamine” is omitted.														
2-Ethoxyethyl acetate	Y	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
“Ethoxylated long chain (C16+) alkyloxyalkylamine” and “Ethoxylated tallow amine (>95%)” are omitted.														
Ethyl acetate	Z	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	AB	No	
“Ethyl acetoacetate” to “Ethylamine” are omitted.														
Ethylamine solutions (72% or less)	Y	S/P	2	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	C	F-T	AC	Yes	15.12, 15.14 & 15.22.10 (15.14), 15.17, 15.19 & 15.22.12 (15.19)
Ethyl amyl ketone	Y	P	3	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
Ethylbenzene	Y	P	2	2G	Cont	No	<u>T2</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
Ethyl tert-butyl ether	Y	P	3	2G	Cont	No	<u>T2</u>	<u>IIB</u>	No	R	F	A	No	15.19.6
Ethyl butyrate	Y	P	3	2G	Cont	No	<u>T4</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
Ethylcyclohexane	Y	P	2	2G	Cont	No	<u>T4</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
N-Ethylcyclohexylamine	Y	S/P	2	2G	Cont	No	<u>T3</u>	<u>IIB</u>	No	R	F-T	A	No	15.19.6

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
<i>Product Name</i>	<i>Pollution Category</i>	<i>Hazards</i>	<i>Ship Type</i>	<i>Tank Type</i>	<i>Tank Vents</i>	<i>Tank Environmental Control</i>	<i>Electrical Equipment</i>			<i>Gauging</i>	<i>Vapour</i>	<i>Fire Extinguishing</i>	<i>Respiratory and Eye Protection</i>	<i>Special Requirements</i>
							<i>Class</i>	<i>Group</i>	<i>Flashpoint >60 °C</i>					
“S-Ethyl dipropylthiocarbamate” to “Ethylene glycol methyl ether acetate” are omitted.														
Ethylene glycol monoalkyl ethers	Y	S/P	3	2G	Cont	No	T2	IIB	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
“Ethylene glycol phenyl ether” to “Ethylene-vinyl acetate copolymer (emulsion)” are omitted.														
Ethyl-3-ethoxypropionate	Y	P	3	2G	Cont	No	T2	IIA	No	R	No	A	No	15.19.6
“2-Ethylhexanoic acid” and “2-Ethylhexyl acrylate” are omitted.														
2-Ethylhexylamine	Y	S/P	2	2G	Cont	No	T3	IIA	No	R	F-T	A	No	15.12, 15.19.6
“2-Ethyl-2-(hydroxymethyl) propane-1,3-diol, C8-C10 ester” is omitted.														
Ethylidene norbornene	Y	S/P	2	2G	Cont	No	T3	IIB	No	R	F-T	AD	No	15.12.1, 15.19.6
“Ethyl methacrylate” and “N-Ethylmethylallylamine” are omitted.														
Ethyl propionate	Y	P	3	2G	Open	No	T1	IIA	No	R	F	A	No	15.19.6
2-Ethyl-3-propylacrolein	Y	S/P	3	2G	Cont	No	T3	IIA	No	R	F-T	A	No	15.19.6, 16.2.3-9. (16.2.9)
Ethyl toluene	Y	P	2	2G	Cont	No	T4	IIA	No	R	F	A	No	15.19.6
“Fatty acid (saturated C13+)” to “Formamide” are omitted.														
Formic acid	Y	S/P	3	2G	Cont	No	T1	IIA	No	R	T(g)	A	Yes	15.11.2, 15.11.3, 15.11.4, 15.11.6, 15.11.7, 15.11.8, 15.19.6, 16.2.3-9. (16.2.9)
Formic acid (85% or less acid)	Y	S/P	3	2G	Cont	No	-	-	Yes	R	T(q)	A	Yes	15.11.2, 15.11.3, 15.11.4, 15.11.6, 15.11.7, 15.11.8, 15.12.3, 15.12.4, 15.19.6, 16.2.3-9. (16.2.9)
Formic acid (over 85%)	Y	S/P	3	2G	Cont	No	T1	IIA	No	R	F-T (q)	A	Yes	15.11.2, 15.11.3, 15.11.4, 15.11.6, 15.11.7, 15.11.8, 15.12.3, 15.12.4, 15.19.6, 16.2.3-9. (16.2.9)
Formic acid mixture (containing up to 18% propionic acid and up to 25% sodium formate)	Z	S/P	3	2G	Cont	No	-	-	Yes	R	T(q)	AC	No	15.11.2, 15.11.3, 15.11.4, 15.11.6, 15.11.7, 15.11.8, 15.12.3, 15.12.4, 15.19.6
“Furfural” to “Groundnut oil” are omitted.														
Heptane (all isomers)	X	P	2	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
“n-Heptanoic acid” is omitted.														
Heptanol (all isomers) (d)	Y	P	3	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6
Heptene (all isomers)	Y	P	3	2G	Cont	No	T4	IIA	No	R	F	A	No	15.19.6

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
<i>Product Name</i>	<i>Pollution Category</i>	<i>Hazards</i>	<i>Ship Type</i>	<i>Tank Type</i>	<i>Tank Vents</i>	<i>Tank Environmental Control</i>	<i>Electrical Equipment</i>			<i>Gauging</i>	<i>Vapour</i>	<i>Fire Extinguishing</i>	<i>Respiratory and Eye Protection</i>	<i>Special Requirements</i>
							<i>Class</i>	<i>Group</i>	<i>Flashpoint >60 °C</i>					
“Heptyl acetate” and “1-Hexadecylnaphthalene/1,4-bis(hexadecyl)naphthalene mixture” are omitted.														
Hexamethylenediamine (molten)	Y	S/P	2	2G	Cont	No	-	-	Yes	C	T	AC	Yes	15.12, 15.17, 15.18, 15.19.6, 15.19 & 15.22.12 (15.19), 16.2.3-9. (16.2.9)
“Hexamethylenediamine adipate (50% in water)” to “Hexamethylene glycol” are omitted.														
Hexamethyleneimine	Y	S/P	2	2G	Cont	No	T4	IIB	No	R	F-T	AC	No	15.19.6
Hexane (all isomers)	Y	P	2	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6
“1,6-Hexanediol, distillation overheads” to “Hexanol” are omitted.														
Hexene (all isomers)	Y	P	3	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6
Hexyl acetate	Y	P	2	2G	Cont	No	T2	IIA	No	R	F	A	No	15.19.6
“Hydrochloric acid” to “Illipe oil” are omitted.														
Isoamyl alcohol	Z	P	3	2G	Cont	No	T2	IIA	No	R	F	AB	No	
Isobutyl alcohol	Z	P	3	2G	Cont	No	T2	IIA	No	R	F	AB	No	
Isobutyl formate	Z	P	3	2G	Cont	No	T4	IIA	No	R	F	AB	No	
Isobutyl methacrylate	Z	P	3	2G	Cont	No	- T2	- IIA	No	R	F	A	No	15.12, 15.13, 15.17, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2)
“Isophorone” to “Isopropanolamine” are omitted.														
Isopropyl acetate	Z	P	3	2G	Cont	No	T1	IIA	No	R	F	AB	No	
“Isopropylamine” is omitted.														
Isopropylamine (70% or less) solution	Y	S/P	2	2G	Cont	No	T2	IIA	No	C	F-T	CD	Yes	15.12, 15.19.6, 16.2.3-9. (16.2.9)
Isopropylcyclohexane	Y	P	2	2G	Cont	No	T4	IIA	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
Isopropyl ether	Y	S/P	3	2G	Cont	Inert	T2	IIA	No	R	F	A	No	15.4.6, 15.13.3, 15.19.6
Jatropha oil	Y	P	2 (k)	2G	Open	No	-	-	Yes	Q	No	AB C	No	15.19.6, 16.2.3-6 (16.2.6)
“Lactic acid” to “Lauric acid” are omitted.														
Ligninsulphonic acid, magnesium salt solution	Z	P	3	2G	Open	No	-	-	Yes	Q	No	AC	No	
“Ligninsulphonic acid, sodium salt solution” to “Mesityl oxide” are omitted.														
Metam sodium solution	X	S/P	12	2G	Open	No	-	-	NF	QC	No-T	No	No	15.12, 15.17,

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
					<u>Cont</u>								<u>Yes</u>	15.19 & 15.22.12 (15.19), 16.2.3-9. (16.2.9)
“Methacrylic acid” to “Methacrylic resin in ethylene dichloride” are omitted.														
Methacrylonitrile	<i>Y</i>	<i>S/P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>C</i>	<i>F-T</i>	<i>A</i>	<i>Yes</i>	15.12, 15.13, 15.17, 15.19 & 15.22.12 (15.19)
3-Methoxy-1-butanol	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	
“3-Methoxybutyl acetate” and “N-(2-Methoxy-1-methylethyl)-2-ethyl-6-methyl chloroacetanilide” are omitted.														
Methyl acetate	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	
“Methyl acetoacetate” and “Methyl acrylate” are omitted.														
Methyl alcohol	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Methylamine solutions (42% or less)	<i>Y</i>	<i>S/P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>C</i>	<i>F-T</i>	<i>AC D</i>	<i>Yes</i>	15.12, 15.17, 15.19 & 15.22.12 (15.19)
Methylamyl acetate	<i>Y</i>	<i>P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Methylamyl alcohol	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Methyl amyl ketone	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
<u>N-Methylaniline</u>	<u><i>Y</i></u>	<u><i>S/P</i></u>	<u>2</u>	<u>2G</u>	<u><i>Cont</i></u>	<u><i>No</i></u>	<u>-</u>	<u>-</u>	<u><i>Yes</i></u>	<u><i>R</i></u>	<u><i>T</i></u>	<u><i>AB C</i></u>	<u><i>No</i></u>	<u>15.12.3,15.12.4,15.19.6</u>
<u>alpha-Methylbenzyl alcohol with acetophenone (15% or less)</u>	<u><i>Y</i></u>	<u><i>S/P</i></u>	<u>2</u>	<u>2G</u>	<u><i>Cont</i></u>	<u><i>No</i></u>	<u>-</u>	<u>-</u>	<u><i>Yes</i></u>	<u><i>C</i></u>	<u><i>T</i></u>	<u><i>AB C</i></u>	<u><i>Yes</i></u>	<u>15.12,15.17, 15.19 & 15.22.12 (15.19), 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)</u>
Methylbutenol	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6, 16.2.3-9. (16.2.9)
Methyl tert-butyl ether	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>AB</i>	<i>No</i>	
Methyl butyl ketone	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>AB</i>	<i>No</i>	15.19.6
Methylbutynol	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIIB</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	
Methyl butyrate	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Methylcyclohexane	<i>Y</i>	<i>P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T3</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Methylcyclopentadiene dimer	<i>Y</i>	<i>P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIIB</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>B</i>	<i>No</i>	15.19.6
“Methylcyclopentadienyl manganese tricarbonyl” to “2-Methyl-6-ethyl aniline” are omitted.														
Methyl ethyl ketone	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	
“2-Methyl-5-ethyl pyridine” is omitted.														

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
Methyl formate	Z	S/P	2	2G	Cont	No	<u>T1</u>	<u>IIA</u>	No	R	F-T	A	Yes	15.12, 15.14 & 15.22.10 (15.14), 15.19 & 15.22.12 (15.19)
<u>2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)</u>	<u>Z</u>	<u>S</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>C</u>	<u>T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.17, 15.19 & 15.22.12 (15.19)</u>
2-Methyl-2-hydroxy-3-butyne	Z	S/P	3	2G	Cont	No	<u>T3</u>	IIA	No	R	F-T	AB D	No	15.19.6, 16.2.3-9. (16.2.9)
Methyl isobutyl ketone	Z	P	3	2G	Cont	No	<u>T1</u>	<u>IIA</u>	No	R	F	AB	No	
“Methyl methacrylate” to “2-Methyl-1, 3-propanediol” are omitted.														
2-Methylpyridine	Z	S/P	2	2G	Cont	No	<u>T1</u>	<u>IIA</u>	No	C	F	A	No	15.12.3, 15.19.6
3-Methylpyridine	Z	S/P	2	2G	Cont	No	<u>T1</u>	<u>IIA</u>	No	C	F	AC	No	15.12.3, 15.19 & 15.22.12 (15.19)
4-Methylpyridine	Z	S/P	2	2G	Cont	No	<u>T1</u>	<u>IIA</u>	No	C	F-T	A	No	15.12.3, 15.19 & 15.22.12 (15.19), 16.2.3-9. (16.2.9)
“N-Methyl-2-pyrrolidone” to “Motor fuel anti-knock compounds (containing lead alkyls)” are omitted.														
Myrcene	X	P	2	2G	Cont	No	<u>- T3</u>	<u>- IIA</u>	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
“Naphthalene (molten)” to “Nitrobenzene” are omitted.														
Nitroethane	Y	S/P	3	2G	Cont	No	<u>T2</u>	IIB	No	R	F-T	A(f)	No	15.19.6, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-4. (16.6.4)
Nitroethane(80%)/Nitropropane(20%)	Y	S/P	3	2G	Cont	No	<u>T2</u>	IIB	No	R	F-T	A(f)	No	15.19.6, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-3. (16.6.3)
Nitroethane, 1-Nitropropane (each 15% or more) mixture	Y	S/P	3	2G	Cont	No	<u>- T2</u>	<u>- IIB</u>	No	R	F	A	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-3. (16.2.3)
“o-Nitrophenol (molten)” and “1-or 2-Nitropropane” are omitted.														
Nitropropane (60%)/Nitroethane (40%) mixture	Y	S/P	3	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F-T	A(f)	No	15.19.6
“o-or p-Nitrotoluenes” is omitted.														
Nonane (all isomers)	X	P	2	2G	Cont	No	<u>T4</u>	<u>IIA</u>	No	R	F	BC	No	15.19.6

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
“Nonanoic acid (all isomers)” and “Non-edible industrial grade palm oil” are omitted.														
Nonene (all isomers)	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6
“Nonyl alcohol (all isomers)” to “Noxious liquid, F, (10) n.o.s. (trade name, contains) ST3, Cat. Z” are omitted.														
<u>Octamethylcyclotetrasiloxane</u>	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>AC</u>	<u>No</u>	<u>15.19.6, 16.2.3-9. (16.2.9)</u>
Octane (all isomers)	<u>X</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6
“Octanoic acid (all isomers)” and “Octanol (all isomers)” are omitted.														
Octene (all isomers)	<u>Y</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6
“n-Octyl acetate” is omitted.														
Octyl aldehydes	<u>Y</u>	<u>P</u>	<u>32</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>-T4</u>	<u>-IIB</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6, 16.2.3-9. (16.2.9)
“Octyl decyl adipate” and “Olefin-Alkyl ester copolymer (molecular weight 2000+)” are omitted.														
<u>Olefin Mixture(C7-C9) C8 rich, stabilised</u>	<u>X</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIB</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>AB</u> <u>C</u>	<u>No</u>	<u>15.13,15.19.6</u>
Olefin mixtures (C5-C7)	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6
Olefin mixtures (C5-C15)	<u>X</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T3</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6
“Olefins (C13+, all isomers)” is omitted.														
alpha-Olefins (C6-C18) mixtures	<u>X</u>	<u>P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T4</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.19.6, 16.2.3-9. (16.2.9)
“Oleic acid” to “Paraldehyde” are omitted.														
Paraldehyde-ammonia reaction product	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T4</u>	<u>IIB</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>A</u>	<u>No</u>	15.12.3, 15.19 & 15.22.12 (15.19)
“Pentachloroethane” is omitted.														
1,3-Pentadiene	<u>Y</u>	<u>P</u> <u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F-T</u>	<u>AB</u>	<u>No</u>	15.13, 15.19.6, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-3. (16.6.3)
<u>1,3-Pentadiene(greater than 50%),cyclopentene and isomers, mixtures</u>	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>Inert</u>	<u>T3</u>	<u>IIB</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AB</u> <u>C</u>	<u>Yes</u>	<u>15.12,15.13,15.17, 15.19 & 15.22.12 (15.19)</u>
“Pentaethylenehexamine” is omitted.														
Pentane (all isomers)	<u>Y</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T2</u>	<u>IIA</u>	<u>No</u>	<u>R</u>	<u>F</u>	<u>A</u>	<u>No</u>	15.14 & 15.22.10 (15.14), 15.19.6
“Pentanoic acid” and “n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture” are omitted.														

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
Pentene (all isomers)	Y	P	3	2G	Cont	No	<u>T3</u>	<u>IIA</u>	No	R	F	A	No	15.14 & 15.22.10 (15.14), 15.19.6
n-Pentyl propionate	Y	P	3	2G	Cont	No	<u>T4</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
"Perchloroethylene" to "1-Phenyl-1-xylyl ethane" are omitted.														
Phosphate esters, alkyl (C12-C14) amine	Y	P	2	2G	Cont	No	- T4	- IIB	No	R	F	A	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
"Phosphoric acid" to "Phthalic anhydride (molten)" are omitted.														
alpha-Pinene	X	P	2	2G	Cont	No	<u>T3</u>	<u>IIA</u>	No	R	F	A	No	15.19.6
beta-Pinene	X	P	2	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F	A	No	15.19.6
"Pine oil" to "Polyalkylalkenaminesuccinimide, molybdenum oxysulphide" are omitted.														
Polyalkyl (C18-C22) acrylate in xylene	Y	P	2	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F	AB	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
"Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether" to "Polyethylene glycol dimethyl ether" are omitted.														
<u>Poly(ethylene glycol) methylbutenyl ether (MW>1000)</u>	<u>Z</u>	<u>P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>Yes</u>	<u>O</u>	<u>No</u>	<u>AC</u>	<u>No</u>	<u>16.2.3-9. (16.2.9)</u>
"Polyethylene polyamines" to "Polyolefin amide alkeneamine borate (C28-C250)" are omitted.														
Polyolefin amide alkeneamine polyol	Y	S/P <u>P</u>	2	2G	Cont <u>Open</u>	No	-	-	Yes	O	No	AB C	Yes <u>No</u>	15.12, 15.17, 15.19, 15.19.6 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
"Polyolefinamine (C28-C250)" is omitted.														
Polyolefinamine in alkyl (C2-C4) benzenes	Y	P	2	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F	A	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
Polyolefinamine in aromatic solvent	Y	P	2	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F	A	No	15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
"Polyolefin aminoester salts (molecular weight 2000+)" to "Polypropylene glycol" are omitted.														
Polysiloxane	Y	P	3	2G	Cont	No	<u>T4</u>	<u>IIB</u>	No	R	F	AB	No	15.19.6, 16.2.3-9. (16.2.9)
"Potassium chloride solution" to "n-Propanolamine" are omitted.														
<u>2-Propene-1-aminium,N,N-dimethyl-N-2-propenyl-,chloride, homopolymer</u>	<u>Y</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>NF</u>	<u>O</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>15.19.6</u>

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
<u>solution</u>														
“beta-Propiolactone” is omitted.														
Propionaldehyde	<i>Y</i>	<i>S/P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIB</u>	<i>No</i>	<i>R</i>	<i>F-T</i>	<i>A</i>	<i>Yes</i>	15.17, 15.19.6
“Propionic acid” to “Propionitrile” are omitted.														
n-Propyl acetate	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T1</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>AB</i>	<i>No</i>	15.19.6
n-Propyl alcohol	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
“n-Propylamine” is omitted.														
Propylbenzene (all isomers)	<i>Y</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Propylene glycol methyl ether acetate	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T2</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	
Propylene glycol monoalkyl ether	<i>Z</i>	<i>P</i>	3	2G	<i>Cont</i>	<i>No</i>	<u>T3</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>AB</i>	<i>No</i>	
“Propylene glycol phenyl ether” and “Propylene oxide” are omitted.														
Propylene tetramer	<i>X</i>	<i>P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T3</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
Propylene trimer	<i>Y</i>	<i>P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T3</u>	<u>IIA</u>	<i>No</i>	<i>R</i>	<i>F</i>	<i>A</i>	<i>No</i>	15.19.6
“Pyridine” to “Sodium borohydride (15% or less)/Sodium hydroxide solution” are omitted.														
<u>Sodium bromide solution(less than 50%)</u> (*)	<u>Y</u>	<u>S/P</u>	<u>3</u>	<u>2G</u>	<u>Open</u>	<u>No</u>	<u>-</u>	<u>-</u>	<u>NF</u>	<u>R</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>15.19.6</u>
“Sodium carbonate solution” to “Sodium hydrogen sulphite solution (45% or less)” are omitted.														
Sodium hydrosulphide/Ammonium sulphide solution	<i>Y</i>	<i>S/P</i>	2	2G	<i>Cont</i>	<i>No</i>	<u>T4</u>	<u>IIB</u>	<i>No</i>	<i>C</i>	<i>F-T</i>	<i>A</i>	<i>Yes</i>	15.12, 15.14 & 15.22.10 (15.14), 15.17, 15.19 & 15.22.12 (15.19), 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2), 16.2.7-3. (16.6.3)
“Sodium hydrosulphide solution (45% or less)” to “Sodium hypochlorite solution (15% or less)” are omitted.														
<u>Sodium methylate 21-30% in methanol</u>	<u>Y</u>	<u>S/P</u>	<u>2</u>	<u>2G</u>	<u>Cont</u>	<u>No</u>	<u>T1</u>	<u>IIA</u>	<u>No</u>	<u>C</u>	<u>F-T</u>	<u>AC</u>	<u>Yes</u>	15.12,15.17, 15.19 & 15.22.12 (15.19), 16.2.3-6. (16.2.6) (only if>28%),16.2.3-9. (16.2.9)
“Sodium nitrite solution” to “Sunflower seed oil” are omitted.														
Tall oil, crude	<i>Y</i>	<i>S/P</i>	2	2G	<i>Cont</i> <i>Open</i>	<i>No</i>	-	-	<i>Yes</i>	<i>C</i> <i>Q</i>	<i>F</i> <i>No</i>	<i>AB</i> <i>C</i>	<i>Yes</i> <i>No</i>	15.12, 15.17, 15.19 & 15.22.12 (15.19), 15.19.6, 16.2.3-6. (16.2.6)

Table S17.1 Summary of Minimum Requirements

<i>a</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i'</i>	<i>i''</i>	<i>i'''</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>n</i>	<i>o</i>
Product Name	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment			Gauging	Vapour	Fire Extinguishing	Respiratory and Eye Protection	Special Requirements
							Class	Group	Flashpoint >60 °C					
“Tall oil, distilled” and “Tall oil fatty acid (resin acids less than 20%)” are omitted.														
Tall oil pitch	Y	S/P	2	2G	Cont Open	No	-	-	Yes	EO	FN	AB C	Yes No	15.12, 15.17, 15.19 & 15.22.12 (15.19), 15.19.6, 16.2.3-6. (16.2.6), 16.2.3-9. (16.2.9)
“Tallow” to “Titanium dioxide slurry” are omitted.														
Toluene	Y	P	3	2G	Cont	No	T1	IIA	No	R	F	A	No	15.19.6
“Toluenediamine” to “Triethyl phosphate” are omitted.														
Triethyl phosphite	Z	S/P	3	2G	Cont	No	T3	IIA	No	R	F-T	AB	No	15.12.1, 15.19.6, 16.2.3-9. (16.2.9)
“Triisopropanolamine” to “Trimethylacetic acid” are omitted.														
Trimethylamine solution (30% or less)	Z	S/P	2	2G	Cont	No	T3	IIB	No	C	F-T	AC	Yes	15.12, 15.14 & 15.22.10 (15.14), 15.19 & 15.22.12 (15.19), 16.2.3-9. (16.2.9)
Trimethylbenzene (all isomers)	X	P	2	2G	Cont	No	T1	IIA	No	R	F	A	No	15.19.6
“Trimethylol propane propoxylated” to “2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate” are omitted.														
1,3,5-Trioxane	Y	S/P	3	2G	Cont	No	T2	IIB	No	R	F	AD	No	15.19.6, 16.2.3-9. (16.2.9)
“Tripropylene glycol” to “Tung oil” are omitted.														
Turpentine	X	P	2	2G	Cont	No	T1	IIA	No	R	F	A	No	15.19.6
“Undecanoic acid” to “Vinyl neodecanoate” are omitted.														
Vinyltoluene	Y	S/P	2	2G	Cont	No	T1	IIA	No	R	F	AB	No	15.13, 15.19.6, 16.2.7-1. (16.6.1), 16.2.7-2. (16.6.2)
“Waxes” is omitted.														
White spirit, low (15-20%) aromatic	Y	P	2	2G	Cont	No	T3	IIA	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9)
Wood lignin with sodium acetate/oxalate	Z	S/P	3	2G	Open	No	-	-	NF	O	No	No	No	
Xylenes	Y	P	2	2G	Cont	No	T1	IIA	No	R	F	A	No	15.19.6, 16.2.3-9. (16.2.9) (h)
Xylenes/ethylbenzene (10% or more) mixture	Y	P	2	2G	Cont	No	-T2	-IIA	No	R	F	A	No	15.19.6
“Xylenol” to “Zinc alkyl dithiophosphate (C3-C14)” are omitted.														

Chapter 18 LIST OF CHEMICALS TO WHICH THIS PART DOES NOT APPLY (with reference to IBC Code Chapter 18)

18.1 General

18.1.1 Application

Table S18.1 has been amended as follows.

Table S18.1 List of Chemicals to Which This Part does not Apply

Product name	Pollution Category ⁽¹⁾
Acetone	Z
Alcoholic beverages, n.o.s.	Z
Apple juice	OS
n-Butyl alcohol	Z
sec-Butyl alcohol	Z
<u>Calcium carbonate slurry</u>	<u>OS</u>
Calcium nitrate solutions (50% or less)	Z
Clay slurry	OS
Coal slurry	OS
Diethylene glycol	Z
Ethyl alcohol	Z
Ethylene carbonate	Z
Glucose solution	OS
Glycerine	Z
Glycerol ethoxylated	OS
Hexamethylenetetramine solutions	Z
Hexylene glycol	Z
Hydrogenated starch hydrolysate	OS
Isopropyl alcohol	Z
Kaolin slurry	OS
Lecithin	OS
Magnesium hydroxide slurry	Z
Maltitol solution	OS
N-Methylglucamine solution (70% or less)	Z
Methyl propyl ketone	Z
<u>Microsilica slurry</u>	<u>OS</u>
Molasses	OS
Noxious liquid, (11) n.o.s. (trade name, contains) Cat. Z ⁽²⁾	Z
Non-noxious liquid, (12) n.o.s. (trade name, contains) Cat. OS ⁽²⁾	OS
Orange juice (concentrated)	OS
Orange juice (not concentrated)	OS
Polyaluminium chloride solution	Z
Polyglycerin, sodium salt solution (containing less than 3% sodium hydroxide)	Z
Potassium chloride solution (less than 26%)	OS
Potassium formate solutions	Z

Propylene carbonate	Z
Propylene glycol	Z
Sodium acetate solutions	Z
Sodium bicarbonate solution (less than 10%)	OS
Sodium sulphate solutions	Z
Sorbitol solution	OS
Sulphonated polyacrylate solution	Z
Tetraethyl silicate monomer/oligomer (20% in ethanol)	Z
Triethylene glycol	Z
Vegetable protein solution (hydrolysed)	OS
Water	OS

(notes)

- (1) Some liquid substances are identified as falling into pollution category Z and, therefore, subject to certain requirements of *Annex II* of *MARPOL 73/78*.
- (2) Liquid mixtures which are assessed or provisionally assessed under regulation 6.3 of *MARPOL Annex II* as falling into Pollution Category Z or OS , and which do not present safety hazards, may be carried under the appropriate entry in this Table for “Noxious or Non-Noxious Liquid Substances, not otherwise specified (n.o.s.)”.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 June 2014.