

ANNEX 5
Resolution MEPC 27(23)
CATEGORIZATION OF LIQUID SUBSTANCES
adopted on 8 July 1986

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CATEGORIZATION OF LIQUID SUBSTANCES MEPC 23/22
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THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING resolutions MEPC 16(22) and 17(22) by which the Committee adopted amendments to Annex II of MARPOL 73/78 and decided that the Parties to MARPOL 73/78 shall be bound by the provisions of Annex II of MARPOL 73/78 as amended as from 6 April 1987,

NOTING regulations 3 and 4 of Annex II and its appendices II and III by which liquid substances are categorized according to the environmental hazards they pose upon release into the sea and that under regulation 13 chemical tankers carrying noxious liquid substances of category A, B or C must comply with the requirements of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) or the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code),

NOTING ALSO regulation 3(4) which specifies the procedure for provisionally assessing and categorizing the liquid substances not listed in appendix II or III of Annex II and regulation 5(6) which prohibits the discharge into the sea of ballast water, tank washings or other residues or mixtures containing substances not categorized or provisionally assessed, and which may have the consequence of requiring additional needs for reception facilities for the time period before the substance is provisionally assessed,

NOTING FURTHER that under regulation VII/10 of the International Convention for the Safety of Life at Sea, 1974, as amended (the 1974 SOLAS Convention), chemical tankers must also comply with the requirements of the IBC Code,

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NOTING that the Sub-Committee on Bulk Chemicals in the interest of the smooth implementation of Annex II has provided provisional assessments and specified carriage requirements under the Bulk Chemical Codes for a large number of substances presently not listed in appendices II and III of Annex II, as set out at Annex 1 to this resolution,

BEING AWARE that there still remain many liquid chemicals presently known to be carried in bulk, such as those listed in Annex 2 to this resolution, which have neither been included in appendices II and III of Annex II nor provisionally assessed,

RECOGNIZING the urgent need for assessing the substances listed in Annex 2 to this resolution, in order to assist Member States in their efforts to implement the provisions of Annex II and also to avoid a transitional need for shore reception facilities,

HAVING CONSIDERED the recommendations of the Sub-Committee on Bulk Chemicals made at its sixteenth session,

1. APPROVES, the provisional assessments and the provisional minimum carriage requirements in the IBC and BCH Codes for liquid substances as set out in Annex 1 to this resolution, pending the final assessments for these substances and the formal amendments to appendices II and III to Annex II of MARPOL 73/78 and to chapter 17 or 18 of the IBC Code and chapter VI or VII of the BCH Code;
2. URGES flag and port States to accept these provisional assessments and provisional minimum carriage requirements and to apply the requirements of Annex II of MARPOL 73/78 and the IBC and BCH Codes in accordance with these provisional assessments and carriage requirements;
3. REQUESTS flag States and port States to provide the Organization with data on liquid substances listed in Annexes 1 and 2 so that final assessments and minimum carriage requirements can be developed;

4. REQUESTS ALSO flag and port States to inform the Organization of any liquid substances known to be carried in bulk and not listed in Annex 1 or 2, or in appendices II and III of Annex II of MARPOL 73/78 together with data necessary for preparing final assessments;

5. INVITES the Sub-Committee on Bulk Chemicals to continue to develop, with high priority, provisional assessment and provisional minimum carriage requirements, as necessary, for those substances listed in Annex 2 and referred to in paragraph 4 above, for the purpose of implementation of regulation 3(4) of Annex II of MARPOL 73/78;

6. INVITES ALSO the Maritime Safety Committee to approve the provisional minimum Bulk Chemical Code carriage requirements for the purpose of the 1974 SOLAS Convention.

PROVISIONAL POLLUTION CATEGORY AND MINIMUM CARRIAGE
REQUIREMENTS ESTABLISHED BY THE SUB-COMMITTEE ON BULK CHEMICALS*

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Resolution MEPC 27(25)
1. CATEGORIZATION OF LIQUID SUBSTANCES
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Product Name	UN Number	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Equipment		Flashpoint 60°C	Gauging	Vapour Detection	Fire Protection	Materials of Construction	Respiratory and Eye Protection	Special Requirements (see Chapter 15)
								Class	Group							
a	b	c	d	e	f	g	h	i'	i''	i'''	j	k	l	m	n	o
Anthracene oil (coal tar fraction)		[A]	P	2	2G	Open	No			Yes	O	No	A	No	No	15.19.6
Butyl benzenes	2709	[C]	P	3	2G	Cont.	No			No	R	F	A	No	No	15.19.6
Butyl heptyl ketone		[C]	P	3	2G	Open	No			Yes	O	No	A	No	No	
Calcium bromide/Zinc bromide mixtures solution		[A]	P	2	2G	Open	No		NE		O	No	A	No	No	15.19.6
4-Chloro-2 methyl-phenoxyacetic acid, dimethylamine salt solution		[A]	P	3	2G	Open	No		NE		O	No	No	No	No	
p-Dichlorobenzene (molten)	1592	[B]	S/P	2	2G	Cont.	No			Yes	R	T	B,D	N5	No	15.19.6
Diphenylol propane-epichlorohydrin resins		[B]	P	3	2G	Open	No			Yes	O	No	B	No	No	
Dodecylamine/Tetra-decylamine mixture		[C]	S/P	3	2G	Cont.	No			Yes	R	T	A,D	N2	No	

* As the substances are evaluated by GESAMP and finally categorized, they are circulated as amendments to the IBC and BCH Codes under cover of MSC/MEPC Circulars and these substances will be deleted from this list. As the provisional category and minimum carriage requirements are established for new substances they will be added to this list.

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a	b	c	d	e	f	g	h	i'	i''	i'''	j	k	l	m	n	o
Ethyl hexyl phthalate		[C]	P	3	2G	Open	No			Yes	O	No	A	No	No	
Isobutyl isobutyrate	2528	[B]	P	3	2G	Cont.	No			No	R	F	A	No	No	15.19.6
Magnesium sulphate		[C]	P	3	2G	Open	No			Yes	O	No	A	No	No	
3-Methylpyridine	2313	[B]	S/P	2	2G	Cont.	No			No	C	F	A,C	N4	No	15.2.3, 15.19
Octyl nitrates (all isomers)		[B]	S/P	3	2G	Open	No			Yes	O	No	B	No	No	15.XX,* 16.6
Pine oil	1272	[A]	P	3	2G	Open	No			Yes	O	No	A	No	No	
Tetradecylbenzene		[C]	P	3	2G	Open	No			Yes	O	No	A	No	No	
Undecylbenzene		[C]	P	3	2G	Open	No			Yes	O	No	A	No	No	

* Proposed IBC Code Special Requirement

15.XX Octyl nitrates, all isomers

15.XX.1

The carriage temperature of the cargo should be maintained below 100°C to prevent the occurrence of a self-sustaining exothermic decomposition reaction.

15.XX.2

The cargo may not be carried in independent pressure vessels permanently affixed to the vessels deck unless:

- .1 the tanks are sufficiently insulated from fire; and
- .2 the vessel has a water deluge system for the tanks such that the cargo temperature is maintained below 100°C and the temperature rise in the tanks does not exceed 1.5°C/hour for a fire of 650°C (1200°F).

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2. Entries in Chapter VI of the BCH Code
adopted on 8 July 1988

Product Name	UN Number	Pollution Category	Hazards	Ship Type	Tank Type	Tank Vents	Tank Environmental Control	Electrical Requirements	Gauging	Vapour Detection	Fire Protection	Special Requirements (see Chapter VI)
a	b	c	d	e	f	g	h	i	j	k	l	m
Anthracene oil (coal tar fraction)		[A]	P	2	2G	Open	No	St	O	No	A	4.14.1
Butyl benzenes		[C]	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Butyl heptyl ketone		[C]	P	3	2G	Open	No	St	O	No	A	
Calcium bromide/Zinc bromide mixtures solution		[A]	P	2	2G	Open	No	St	O	No	A	4.14.1
4-chloro-2-methyl-phenoxyacetic acid, dimethylamine salt solution		[A]	P	3	2G	Open	No	St	No	No	No	
p-Dichlorobenzene (molten)	1592	[B]	S/P	2	2G	Cont.	No	St	R	T	B,D	4.12.5
Diphenylol propane-epichlorohydrin resins		[B]	P	3	3G	Open	No	St	O	No	B	
Dodecylamine/Tetra-decylamine mixture		[C]	S/P	3	2G	Cont.	No	St	R	T	A,D	4.12.2
Ethyl hexyl phthalate		[C]	P	3	2G	Open	No	St	O	No	A	
Isobutyl isobutyrate	2528	[B]	P	3	2G	Cont.	No	SP	R	F	A	4.14.1

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a	b	c	d	e	f	g	h	i	j	k	l	m
Magnesium sulphonate		[C]	P	3	2G	Open	No	St	O	No	A	
3-Methylpyridine	2313	[B]	S/P	2	2G	Coat.	No	SP	C	F	A,C	4.9.3, 4.12.4, 4.14
Octyl nitrates (all isomers)		[B]	S/P	3	2G	Open	No	St	O	No	B	4.XX*
Pine oil	1272	[A]	P	3	2G	Open	No	St	O	No	A	
Tetradecylbenzene		[C]	P	3	2G	Open	No	St	O	No	A	
Undecylbenzene		[C]	P	3	2G	Open	No	St	O	No	A	

* Proposed Bulk Chemical Code Special Requirement

4.XX Octyl nitrates, all isomers

4.XX.1

The carriage temperature of the cargo should be maintained below 100°C to prevent the occurrence of a self-sustaining exothermic decomposition reaction.

4.XX.2

The cargo may not be carried in independent pressure vessel's permanently affixed to the vessels deck unless:

- .1 the tanks are sufficiently insulated from fire; and
- .2 the vessel has a water deluge system for the tanks such that the cargo temperature is maintained below 100°C and the temperature rise in the tanks does not exceed 1.5°C/hour for a fire of 650°C (1200°F).

3. Entries in IBC Code Chapter 18/BCH Code Chapter VII

<u>Product Name</u>	<u>Pollution Category</u>
Ammonium hydrogen phosphate	[III]*
Benzenetricarboxylic acid, trioctyl ester	[D]
Calcium carbonate slurry	[III]
Coconut oil fatty acid	[D]
Di-n-Hexyl adipate	[III]
Dimethyl succinate	[D]
Edible oils including:	[D]
Babassu	
Beechnut	
Cocoa butter	
Coconut oil, esterefied	
Hazelnut	
Nutmeg butter	
Poppy	
Peel oil (oranges and lemons)	
Raisin seed	
Salad	
Soybean	
Walnut	
Ethylene glycol dibutyl ether	[D]
Ethylene, propylene copolymer (in liquid mixtures)	[III]
Glycol triacetate	[III]
iso-Heptane	[III]
1,6-Hexanediol	[III]
Kaolin clay slurry	[III]
Kaolin slurry	[III]
Methyl acetosacetate	[D]
Miscellaneous oils, including:	[D]
Lanolin	
Neatsfoot	
Oiticica	
Perilla	
Pilchard	
Whale	

* Substances identified to be included in Appendix III of Annex II.

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<u>Product Name</u>	<u>Pollution Category</u>
Nonyl methacrylate monomer	[D]
Palmnut oil fatty acid	[D]
Petrolatum	[D]
Polyisobutylene	[III]
Polypropylene	[III]
Potassium chloride	[III]
Silica slurry	[III]
Tridecane	[D]
Waxes	[D]

ANNEX 2

SUBSTANCES KNOWN TO BE MOVED IN BULK BUT EVALUATION OF SAFETY OR
ENVIRONMENTAL HAZARDS NOT YET COMPLETED

<u>Product Name</u>	<u>Pollution Category</u>
Acetyl tributyl citrate	
Acrylic copolymer in ethyl acetate aqueous solution	
Alkenyl succinate, potassium salt solution	
Alkenylsuccinic acid	
Alkenylsuccinic anhydride	
Alkyl paint resins	
Alkyl phosphorous acid ester	
Amyl tallate	
Aromasol H	
Butyl octyl phthalate	
C-Streams containing 15% or more Isoprene	
Calcium alkylphenate	
Calcium amino nonyl phenolate	
Calcium carboxylate	
Calcium nitrate/ Magnesium nitrate/ Ammonium nitrate/ Potassium chloride Mixture solution	
Calcium Sulphonate, Calcium carbonate, Hydrocarbon solvents mixture (low oil saci feed)	
Clairsol 250	
Cumarone	
Cyclohexane oxidation product acid water, 50% aqueous solution	
Cyclohexanol acetate	
1,3 Cyclopentadiene, molten	

<u>Product Name</u>	<u>Pollution Category</u>
DA feed - mixture of benzene and toluene	
Dehexanister	
Detergent Alkylate	
Di-(octylphenyl)amine	
Dibutyl maleate	
Diethylene maleate	
Dimethyl adipate	
N,N Dimethylaniline styrenic solution	
Dimethyl glutarate	
Dimethyl polysiloxane	
Dimethylcyclicsiloxane hydrolyzate (70% or less)	
2,2-Dimethyloctanoic acid	
Dipropylene glycol dibenzoate	
Dodecyl mercaptan	
Drilling mud	
Dutrex 729 HP	
Escaids	
Ether chloro-cyclopentadiene	
Ethyl chlorothioformate	
Ethyl hexyl tallate	
2-Ethyl-6 Methyl-N(1-Methyl-2-Methoxyethyl) Aniline (Herbicide)	
Ethyleneimine	B
Eucalyptus oil	
Exsol	
Exsol heptane	
Fatty acid amides	
Halpasol	
Heartcut alkylate	
Heartcut distillates	
Heavy alkylate	
Herbicide (C ₁₅ -H ₂₂ -NO ₂ -C ₁)	
Hexamethylene tetramine solution	III
C ₅ Hydrocarbons fraction (Residue from naphtha cracking)	

<u>Product Name</u>	<u>Pollution Category</u>
2-Hydroxy-4-(Methylthio) Butanol acid	
Isodecyldiphenyl phosphate	
Isopar G/L	
Isoparaffin hydrocarbon oils (IP solvents)	
KA-Oil (mix of cyclohexanol and cyclohexanone)	
Ketrol	
Kononyl Neu	
Linevol phthalate	
Linevol, synthetic primary fatty alcohol	
Liquid isocyanates having boiling points lower than 300°C and flashpoints higher than 61°C, and their solutions	
Lube oil additives	
Magnesium nonyl phenol sulphide	
Methyl bromide	B
Methyl butenol	
Methyl butynol	
Methyl carbonate	
Methyl cyclopentadiene dimer	
Methyl formal (Dimethyl formal)	
MIBK, MEK and Ethyl acetate mixture (ENJ 1013 Exxon)	
n-Octyl chloride	
Naphthalene sulphonic acid-formaldehyde co-polymer, sodium salt solution	
Neodene	
Neodol	
Niax Polyols	
Norpar 12	
Octadecenoamide (Oleamide)	
Octyl decyl adipate	
Octyl epoxytallate	
Octyl nitrates (mixed)	

Product Name

Pollution Category

Oils:

Croton
Mustard Seed
Tucum
Resin
Resinous petroleum
Soapstock
Spray
Tanner's
Wood
Organic amine 70 (mixture of high molecular
weight alcohol amines)
Palatinol Z
Paradynes
Pegasol
Phenethyl cumene
Phosphosulphized bicyclic terpene
Poly-isopropyl-amino-alanate in
ethanic solution
Polyalkenyl succinic anhydride amine
Polyamine, amide mixture
Polystyrene dialkyl maleate
Polyvinylbenzyl trimethyl ammonium chloride
Prestol 140E
Pyrolocondensate
Pyrolosis gasoline (stream cracked naphtha)
Raffinate
Shellsols - Aliphatic solvent naphtha
Sodium acetate, glycol solutions
Sodium dimethyl naphthalene
sulphonate solution
Sodium naphthalene sulphonate
solution 40% or less
Sodium sulphonate

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Sodium-N-Methyldithiocarbonate
solution 33% or less

Softanols (Detergent alcohols)

Solvesso

Somil SR - High boiling point aromatic oils

Sulphur chloride

(B)

Synthetic resin, unsaturated hydrocarbons
C-20 to C-60 (GTLA polymer-Exxon)

Tallow nitrile

Tergitols

Tetramer D

Texanol

Triethylene glycol diethyl butyrate

Triisooctyl trimellitate

Trimethyl benzene, Xylene, para-Ethyl
toluene mixture

Trimethyl phosphite

Varanol

Varsol

Vinyl acetate, fumarate copolymer

Vinylcyclohexene

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