



Ref. T4/7.01

MSC.1/Circ.1325  
10 June 2009

**MISSING INFORMATION ON APPARATUS GROUPS IN COLUMN i" OF  
CHAPTER 17 OF THE IBC CODE**

1 The Maritime Safety Committee, at its eighty-sixth session (27 May to 5 June 2009), noting that the provisions in paragraphs 1.2.3 and 4.1.4 of the Revised standards for the design, testing and location of devices to prevent the passage of flame into cargo tanks in tankers (MSC/Circ.677), needed clarification to ensure that the maximum experimental safe gap (MESG) value for the medium to be used to test the device is appropriate for the product certified to be carried in the tank fitted with such a device, approved the following amendments to MSC/Circ.677:

.1 Paragraph 1.2.3 is replaced with the following:

“1.2.3 These Standards are intended for devices protecting cargo tanks containing crude oil, petroleum products and flammable chemicals. In the case of the carriage of chemicals, the test media referred to in section 3 can be used for products having an MESG of 0.9 mm and greater. However, devices for chemical tankers certified for the carriage of products with an MESG\* less than 0.9 mm should be tested with the following media based on the apparatus group assigned as per column i" of the IBC Code, chapter 17:

- .1 Apparatus Group II B – ethylene (MESG = 0.65 mm); and
- .2 Apparatus Group II C – hydrogen (MESG = 0.28 mm).”

2 Member Governments are invited to apply the above amendments to the Revised standards, as promulgated by MSC/Circ.1324, to ships constructed on or after 1 January 2013 and to ships constructed before 1 January 2013, no later than the first scheduled dry-docking carried out on or after 1 January 2013.

3 Attention is drawn to the fact that information on apparatus groups in column i" is missing in relation to a large number of products listed in chapter 17 of the IBC Code, as set out in annex 1. In order to allow sufficient time for the ESPH Working Group to receive and review the aforementioned missing information and to prepare corresponding amendments to the IBC Code, missing data needed to determine the electrical apparatus group should be sent to IMO, in the format specified in annex 2, no later than 31 December 2010.

4 Member Governments are invited to bring this circular to the attention of the parties concerned.

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\* Reference is made to IEC – Publication 79-1.



## ANNEX 1

**LIST OF PRODUCTS THAT HAVE A “NO” IN COLUMN i” AND DO NOT HAVE AN ENTRY IN COLUMN i” AND IS INDICATED AS BEING FLAMMABLE VAPOUR IN COLUMN “K” OF CHAPTER 17 OF THE IBC CODE**

Alkanes (C6-C9)	Ethyl acetate
Alkyl acrylate-vinylpyridine copolymer in toluene	Ethylamine solutions (72% or less)
Alkyl (C3-C4) benzenes	Ethyl amyl ketone
Alkyl(C8-C9) phenylamine in aromatic solvents	Ethylbenzene
Ammonium sulphide solution (45% or less)	Ethyl tert-butyl ether
Amyl acetate (all isomers)	Ethyl butyrate
n-Amyl alcohol	Ethylcyclohexane
Amyl alcohol, primary	N-Ethylcyclohexylamine
sec-Amyl alcohol	Ethylene glycol monoalkyl ethers
tert-Amyl alcohol	Ethyl-3-ethoxypropionate
tert-Amyl methyl ether	2-Ethylhexylamine
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95-120°)	Ethylidene norbornene
Butyl acetate (all isomers)	Ethyl propionate
tert-Butyl alcohol	Ethyl toluene
Butylamine (all isomers)	Heptane (all isomers)
Butylbenzene (all isomers)	Heptanol (all isomers) (d)
Butyl butyrate (all isomers)	Heptene (all isomers)
n-Butyl propionate	Hexamethyleneimine
m-Chlorotoluene	Hexane (all isomers)
o-Chlorotoluene	Hexene (all isomers)
p-Chlorotoluene	Hexyl acetate
Chlorotoluenes (mixed isomers)	Isoamyl alcohol
Cycloheptane	Isobutyl alcohol
Cyclohexane	Isobutyl formate
Cyclohexyl acetate	Isopropyl acetate
1,3-Cyclopentadiene dimer(molten)	Isopropylamine(70% or less) solution
Cyclopentane	Isopropylcyclohexane
Cyclopentene	Isopropyl ether
p-Cymene	Liquid chemical wastes
Decahydronaphthalene	Methacrylonitrile
Decene	3-Methoxy-1-butanol
Diacetone alcohol	Methyl acetate
3,4-Dichloro-1-butene	Methyl alcohol
1,6-Dichlorohexane	Methylamine solutions (42% or less)
1,1-Dichloropropane	Methylamyl acetate
Dichloropropene/Dichloropropane mixtures	Methylamyl alcohol
Diethylbenzene	Methyl amyl ketone
Diisobutylamine	Methylbutenol
Diisobutylene	Methyl tert-butyl ether
Diisobutyl ketone	Methyl butyl ketone
Dimethylamine solution(greater than 45% but not greater than 55%)	Methylbutynol
Dimethylamine solution(greater than 55% but not greater than 65%)	Methyl butyrate
N,N-Dimethylcyclohexylamine	Methylcyclohexane
Dipentene	Methylcyclopentadiene dimer
Di-n-propylamine	Methyl ethyl ketone
Dodecane (all isomers)	Methyl formate
2-Ethoxyethyl acetate	Methyl isobutyl ketone
	2-Methylpyridine
	3-Methylpyridine
	4-Methylpyridine

Nitropropane(60%)/Nitroethane(40%) mixture  
Nonane (all isomers)  
Nonene (all isomers)  
Octane (all isomers)  
Octene (all isomers)  
Olefin mixtures(C5-C7)  
Olefin mixtures(C5-C15)  
alpha-Olefins(C6-C18) mixtures  
Paraldehyde-ammonia reaction product  
1,3-Pentadiene  
Pentane (all isomers)  
Pentene (all isomers)  
n-Pentyl propionate  
alpha-Pinene  
beta-Pinene  
Polyalkyl (C18-C22)acrylate in Xylene  
Polyolefinamine in alkyl(C2-C4)benzenes  
Polyolefinamine in aromatic solvent  
Polysiloxane  
Propionaldehyde  
n-Propyl acetate  
n-Propyl alcohol  
Propylbenzene (all isomers)  
Propylene glycol methyl ether acetate

Propylene glycol monoalkyl ether  
Propylene tetramer  
Propylene trimer  
Sodium hydrosulphide/Ammonium sulphide solution  
Toluene  
Triethyl phosphite  
Trimethylamine solution (30% or less)  
Trimethylbenzene (all isomers)  
1,3,5-Trioxane  
Turpentine  
White spirit, low (15-20%) aromatic  
Xylenes

Chapter 18 Products considered as Flammable , < 60°C

Acetone  
Alcoholic beverages, n.o.s.  
n-Butyl alcohol  
sec-Butyl alcohol  
Ethyl alcohol  
Isopropyl alcohol  
Methyl propyl ketone  
Tetraethyl silicate monomer/oligomer(20% in ethanol)

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## ANNEX 2

**INFORMATION REQUESTED TO DETERMINE THE ELECTRICAL  
APPARATUS GROUP**

	<b>Units</b>	<b>QUAL</b>	<b>Lower value</b>	<b>Upper value</b>
Flash Point (cc) (°C)				
Boiling Point (°C)				
Melting Point/Pour Point (°C)				
AutoIgnitionTemp (°C)				
Carriage Temperature (°C)				
Unloading Temperature (°C)				
* MESG (mm)				

\* Criteria for assigning column 'i' Electrical Equipment – IBC Code, chapter 21.4.9.

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