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COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS

GROUP OF RAPPORTEURS ON THE PACKING
OF DANGEROUS GOODS

Fourteenth session
August 1973
Geneva

LISTING AND CLASSIFICATION OF SUBSTANCES AND ARTICLES

Additional substances

Proposal by the expert of the United Kingdom

The expert of the United Kingdom has sent the Secretariat the attached proposals to supplement the lists annexed to the Recommendations (ST/ECA/81/Rev.2).

ADDITIONAL SUBSTANCES

The following lists of chemicals not at present included in the UN list are understood to be transported in commercial quantities.

It is suggested that the Group of Rapporteurs merely takes note of the list at the present time since a critical examination of the properties, classification and grouping is required. The United Kingdom Government hopes to be able to do this in time for the meeting to be held in February 1974.

GE.73-27869

UNCLASSIFIED LIST OF ADDITIONAL SUBSTANCES

A
Acetoacetic acid ethyl ester (see ethyl acetoacetate)
Acetoacetic acid methyl ester (see methyl " ")
Acrylic acid
Allyl glycidyl ether
(1-Allyloxy-2,3-epoxypropane)
Aminochlorophenol
Anisole
B
Benzoic acid
Benzonitrile
Benzosulphochloride
Benzotrichloride (Trichloromethylbenzol)
Bicycloheptadiene (Norbornadine)
Bromochlorodifluoromethane
Butanal (Butyraldehyde)
Butyl glycol acetate
Butyl methacrylate
Butylphenols, liquid
Butylphenols, solid
Butyltoluene
5-tert-Butyl-1,3-xylol
Butyric acid ethyl ester
C
Carbolineum
Carbon dioxide (Carbonic acid), compressed
Chloroacetic aldehyde
Chloroacetic acid methyl ester (see methyl chloroacetate)
p-Chloro-o-anisidine
Chlorobenzotrifluoride
p-Chlorobenzyl chloride
3-Chloro-4-methylphenylisocyanate
Chloronitroanilines
3-Chloropropene (Allylchloride)
Chlorotoluene

Chlorotoluidine
Chromium trifluoride
Chromosulphuric acid
Cycloheptane
Cycloheptene
Cyclohexyl acetate
Cyclopentanol
Cyclopentanone
Cyclopentene
D
n-Decane
Decanol (n-Decyl alcohol)
4-Decanol (sec.Decyl alcohol)
Diacetyl alcohol
Dibromomethane (Methylene bromide)
1,2-Di-n-butoxyethane
Di-n-butylamide
Di-n-butylene
Dichloroacetic acid methyl ester
Dichlorodifluoromethane and dichlorotetrafluoroethane, mixture of
Dichlorodifluoromethane and trichloromonofluoromethane, mixture of
Dichlorodimethyl ether
Dichlorophenols
Dichlorophenyl isocyanate
Dicycloheptadiene
Diisobutylcarbinol (2,6-Dimethyl-4-heptanol)
1,3-Diisopropylbenzene
1,2-Dimethoxyethane (Ethylene glycol dimethyl ether)
Dimethyl acetamide
N,N-Dimethylaniline
Dimethylcarbamic acid chloride
1,4-Dimethylcyclohexane
Dimethylcyclohexylamine
N,N-Dimethyl-2-aminoethanol

N,N-Dimethylformamide
Dimethyl-N-propylamine
Dimethyl thiophosphoryl chloride
Diphenylmethane-4,4'-diisocyanate
Diphenyl-para-phenylenediamine 35% and
Phenyl-beta-naphthylamine 65%, mixture of
Dipropylene triamine
Dithionite
Dodecane
Dodecene-1
Dodecyl mercaptan
E
Ethanolamine
Ethyl acetoacetate
Ethylamine solution, about 50-71%
Ethyl amyl ketone
N-Ethylaniline
2-Ethylaniline
N-Ethylbenzylaniline
2-Ethylbutanol (2-Ethylbutyl alcohol)
Ethylene chlorohydrin (glycol chlorohydrin)
Ethylene glycol diacetate (Ethylene acetate)
2-Ethylhexyl acrylate
Ethylhexylamine
2-Ethylhexyl methacrylate
Ethyl methacrylate
F
Ferrous chloride (Iron chloride, Iron dichloride)
H
Halogenated aluminium alkyl, in solution
Halogenated aluminium alkyl, pure
Heptanols
n-Heptene
Hexachlorobutadiene
Hexamethylenediimine

Hexamethylene diisocyanate
Hexamethylenetetramine
Hexanols (Hexyl alcohol)
Hydrocarbons, mixtures of (liquid) - various flash point categories

I

Iron chloride (see Ferrous chloride)

Isobutyl methacrylate

Isobutyronitrile

Isocyanatobenzotrifluoride

Isododecane

Isoheptene

Isohexene

Isophorone

Isophoronediamine

Isophorone diisocyanate

L

Lead residues

Lead tetraacetate

M

Maleic acid

Maleic anhydride

p-Menthane (4-Isopropyl-1-methylcyclohexane)

3-Methoxy butyl acetate (Butoxyl)

3-Methoxy butyl acetate 3-Methoxybutanol, mixture of

4-Methoxy-4-methyl-pentane-2-one

Methyl acetoacetate

Methylacrylic acid ethyl ester (see ethyl methacrylate)

Methylaniline

2-Methylbutan-2-one

Methyl-n-butyl-methacrylate, solution of

Methyl chloroacetate

Methylcyclohexane

Methylcyclohexanone

Methylcyclopentane

Methyldiphenylamine

Methylene-bis-4-phenyl-isocyanate

2-Methyl-5-ethyl-pyridine

2-Methylfuran

5-Methylhexan-2-one

Methyl Pyridine (2-Picoline)

alpha-Methylstyrene

Methyl vinyl ether

Monochloroacetic acid methyl ester (see methyl chloroacetate)

N

Naphthaline, melted

Nitrobenzenesulphonic acid

m-Nitrobenzotrifluoride

o-Nitrobenzotrifluoride

Nitrochlorobenzene

3-Nitro-4-Chlorobenzotrifluoride

Nitrosylsulphuric acid

O

Octane-3-one

P

Pentane-2-4-dione

Phenetidine (o-,m-, p-Amino-phenetole)

Phenetole

Phenol, melted

Phenylenediamine 42% and
Cumenediamine 58% mixture

Phenyl glycidyl ether

Phenyl-naphthylamine

Phosphoric acid triisobutyl ester dissolved in Propanol

Phosphorus oxychloride

Phosphorus sulphochloride

Phthalic acid

Pivalic acid

Polychlorinated biphenyls (PCB)

S

Salicylaldehyde

Self-igniting metal powders (Aluminium, Magnesium, Zinc)

Sodium cuprocyanide, solid

Sodium cuprocyanide, solution

Sodium cyanamide

Sodium dicyanamide

Sodium hydrosulphide

Sodium perborate

Sulphamic acid

Sulphonic acid

T

Terpene hydrocarbons

Tetraethylenepentamine

Tetraisobutylene

Tetrapropylene

Tetrapropylenebenzene

Toluene diisocyanate

Trichloroacetic aldehyde (Chloral)

Trichlorobenzene, mixture

Trichlorobutene

Triethyl phosphite

Triisobutylene

1,3,5-Trimethylbenzene

3,3,5-Trimethylcyclohexanol

Trimethylcyclohexanone

Trimethylcyclohexylamine

3,3,5-Trimethylcyclohexylamine

3,3,5-Trimethylhexamethylenediamine

Trimethylhexamethylenediisocyanate

Trimethyl phosphite

U

Undecane

X

Xylenols

Z

Zinc chloride, anhydrous

Zinc tetrachloride

INFLAMMABLE LIQUIDS (CLASS 3)

Acetaldehyde oxime

Allyl acetate

Allylamine

Allyl ethyl ether

Allyl formate

Benzenethiol

Benzotrifluoride

Bicycloheptadiene

Boron trifluoride

2-Bromobutane

1-Bromo-2,3-epoxyp propane

2-Bromoethyl ethyl ether

1-Bromo-3-methylbutane

1-Bromo-2-methylpropane

2-Bromo-2-methylpropane

2-Bromopentane

1-Bromopropane

2-Bromopropane

3-Bromopropyne

Butanedione

Butane-1-thiol

Butan-2-ol

Butanone

But-3-en-2-one

isoButyl acetate

Butyl ethyl ether

isoButyl formate

Butyl methyl ether

Butyl nitrite

isoButyl propionate

Butyl vinyl ether
isoButyl vinyl ether
But-2-yne
isoButyraldehyde
Butyronitrile
Butyryl chloride
isoButyrylchloride
1-Chlorobutane
2-Chlorobutane
1-Chloro-3-methylbutane
2-Chloro-2-methylbutane
Chloromethyl ethyl ether
Chloromethyl methyl ether
1-Chloromethylbutane
Chloromethyl ethyl ether
Chloromethyl methyl ether
1-Chloro-2-methylpropane
2-Chloro-2-methylpropane
3-Chloro-2-methylpro-1-ene
1-Chloropentane
1-Chloropropane
2-Chloropropane
Cycloheptatriene
Cyclohexene
Cyclohexylamine
Cyclo-octatetraene
Diallylamine
Diallyl ether
Diisobutene
Diisobutylamine
1,1-Dichloroethane
Cyclohexanol
Ethyl mercaptan
Propyl benzene
Propylene tetramer

4-Methylpentan -2-ol
Diethyl carbonate
Methyl veraldehyde -alpha
Pinene (alpha)
1,2-di-n-butoxyethane
Butylacrylate
Diethylcarbonate
Diethylmalonate
Ethylene glycol monobutyl ether
Vinyl methyl ether
Ethyl propionate
Gammapicoline
Hex-1-ene
Isopentene
2-Methylbutan-2-ol
Naphtha (coal tar, crude and solvent)
Pentamethylheptane
Petroleum raffinate
Phenylacetate
iso-Propyl chloride
Sulphate turpentine
1,2-Dichloroethylene
1,2-Dichloropropane
1,2-Di(dimethylamino)ethane
1,1-Diethoxyethane
Diethoxymethane
3,3-Diethoxypropene
Diethyl sulphide
2,3-Dihydropyran
1,1-Dimethoxyethane
Dimethoxymethane
2-Dimethylamino acetonitrile
1,3-Dimethylbutylamine
Dimethyl carbonate
Dimethyldichlorosilane

Dimethyldiethoxysilane
Dimethyl Disulphide
NN-Dimethylhydrazine
NN-Dimethylhydrazine
1,4-Dioxan
Dipropylamine
Diisopropylamine
Dipropyl ether
Diisopropyl ether
2-Ethylbutyraldehyde
Ethyl iso butyrate
Ethylamine solution
Ethyl nitrite
1-Ethylpiperidine
Ethyl vinyl ether
Fluorobenzene
2-Fluorotoluene
3-Fluorotoluene
Furan
2-Idobutane
1-Iodo-2-methylpropane
2-Iodo-2-methylpropane
1-Iodopropane
2-Iodopropane
Iron carbonyl
Isoprene monomer
Methacraldehyde
3-Methylbutane-1-thiol
2-Methylbutan-2-ol
3-Methylbutan-1-ol
3-Methylbutan-2-one
Methyl terbutyl ether
Methyldichlorosilane
N-Methylformamide
2-Methylpentan-2-ol

4-Methylpentan-2-one
1-Methylpiperidine
2-Methylpropan-2-ol
Methyl isovalerate
Pantan-2-ol
Pantan-2-one
Pantan-3-one
isoPentyl acetate
Pentylamine
isoPentylamine
Pentyl nitrite
isoPentyl nitrite
1-Phenylpropane-1,2-dione
Piperidine
Propane-1-thiol
Propane-2-thiol
Propan-1-ol
Propan-2-ol
isoPropenyl acetate
Propionitrile
isoPropyl acetate
Propylamine
isoPropylamine
isoPropyl butyrate
isoPropyl isobutyrate
isoPropyl chloroformate
Propyleneimine
Propylene oxide
isoPropyl formate
Propyl nitrate
isoPropyl nitrate
isoPropyl propionate
1,2,3,6-Tetrahydropyridine
Tetrahydrothiophen
Tetrapropyl orthotitanate

Thioacetic acid

Thiophen

Triethyl borate

Trimethyl borate

Trimethyl chlorosilane

isoValeraldehyde

Gases

Carbonyl fluoride

Cyanogen chloride

Methanethiol

Sulphur tetrafluoride

Bromotrifluoroethylene

Chlorotrifluoroethylene

Hexafluoroacetone

Nitrogen trioxide

Octafluorobut-2-ene

Tetrafluoroethylene

Bromochlorodifluoromethane

Chlorodifluoroethane

Chlorotetrafluoroethylene

1,1-Difluoroethane

Fluoromethane

Chloro-1,1,1-trifluoroethane

Trifluoromethane

Octafluoropropane

Trifluoroethane

Division 4.3

Potassium

Division 5.1

Ammonium nitrate liquor

Sodium chlorate solution

4-tertbutyl toluene

Alkyl phenol

Ortho-anisidine

Diethyl aniline

Heptylphenol

Chloro-ortho-nitrotoluene
Xylenols
Class 8 Corrosive substances
Boron trichloride
Chlorine trifluoride
Chromyl chloride
Dibenzyl dichlorosilane
Ethyl phenyldichlorosilane
4-Hydroxybenzenesulphonic acid
Mercaptoacetic acid
Thioacetic acid
Methylphenyldichlorosilane
Pentyltrichlorosilane
Phosphoryl bromide
Pivaloyl chloride
Potassium hydrogen fluoride
Potassium sulphide
Sodium hydrogen difluoride
Sodium oxide
Stannic chloric pentahydrate
Disulphur dichloride
Titanium trichloride
Trichloro acetyl chloride
Vanadium oxytrichloride
Vanadium tetrachloride
Sodium hypochlorite
Acetic acid of 60% strength and over
Benzyl chloride
Hydrochloric and nitric acid mixtures
Sodium bifluoride
Sulphuric acid and nitric acid mixtures
Ammonium sulphide solutions
Propylenediamine
Triethylene-tetramine and tripropylamine
