

# HOUSE OF KOLOR POLYURETHANE FLO-KLEAR UFC01

ChemWatch Material Safety Data Sheet

CHEMWATCH 5090-40

Date of Issue: Tue 12-Aug-2003

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## STATEMENT OF HAZARDOUS NATURE

HAZARDOUS ACCORDING TO WORKSAFE AUSTRALIA CRITERIA.

## SUPPLIER

Company:

Meguiar's Australia P/L

Address:

35 Slough Business Park

Holker St, Silverwater

NSW, 2128

AUS

Telephone: (+61 2) 9737 9422

Telephone: 1800 804 182

Fax: (+61 2) 9737 9414

## SYNONYMS

## SHIPPING NAME

PAINT None

Product Name: House of Kolor Polyurethane Flo-Klear UFC01

Other Names: Product Code: UFC-1

CAS RN No(s): None None

UN Number: 1263

Packing Group: II

Dangerous Goods Class: 3

Subsidiary Risk: NONE, NONE

Hazchem Code: 3[Y]E

Poisons Schedule Number: None

## USE

Used according to manufacturers directions.

The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing

Before starting consider control of exposure by mechanical ventilation

For further information refer to the House of Kolor Technical Manual

## PHYSICAL DESCRIPTION/PROPERTIES

### APPEARANCE

Black highly flammable liquid with a solvent odour; does not mix with water.

Boiling Point (°C):	Not Available
Melting Point (°C):	Not Available
Vapour Pressure (kPa):	Not Available
Specific Gravity:	1.019
Flash Point (°C):	15
Lower Explosive Limit (%):	Not Available
Upper Explosive Limit (%):	Not Available
Solubility in Water (g/L):	Immiscible

## INGREDIENTS

NAME	CAS RN	%
n-butyl acetate	123-86-4	1-9
ethyl-3-ethoxypropionate	763-69-9	1-9
xylene	1330-20-7	1-9
aromatic hydrocarbon solvent	64742-95-6.	1-9
ethylene glycol monobutyl ether acetate	112-07-2	1-9
carbon black	1333-86-4	1-2
1-nitropropane	108-03-2	NotSpec
N-methyl-2-pyrrolidone	872-50-4	NotSpec
resin, unregulated		NotSpec
ethylbenzene	100-41-4	NotSpec

## HEALTH HAZARD

## ACUTE HEALTH EFFECTS

### SWALLOWED

The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum.

### EYE

Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

### SKIN

The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives .

Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Toxic effects may result from skin absorption.

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

### INHALED

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

The main effects of simple aliphatic esters are narcosis and irritation and anaesthesia at higher concentrations. These effects become greater as the molecular weights and boiling points increase. Central nervous system depression , headache, drowsiness, dizziness, coma and neurobehavioral changes may also be symptomatic of overexposure. Respiratory tract involvement may produce mucous membrane irritation, dyspnea, and tachypnea, pharyngitis, bronchitis, pneumonitis and, in massive exposures, pulmonary oedema (which may be delayed). Gastrointestinal effects include nausea, vomiting, diarrhoea and abdominal

cramps. Liver and kidney damage may result from massive exposures. Prolonged exposure may cause headache, nausea and ultimately loss of consciousness.

If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

## **CHRONIC HEALTH EFFECTS**

There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS].

Small excess risks of spontaneous abortion and congenital malformation was reported amongst women exposed to xylene in the first trimester of pregnancy. In all cases, however, the women has also been exposed to other substances.

Evaluation of workers chronically exposed to xylene has demonstrated lack of genotoxicity. Exposure to xylene has been associated with increased risks of haemopoietic malignancies but, again, simultaneous exposure to other substances (including benzene) complicates the picture. A long-term gavage study to mixed xylenes (containing 17% ethyl benzene) found no evidence of carcinogenic activity in rats and mice of either sex.

## **FIRST AID**

### **SWALLOWED**

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

### **EYE**

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

## SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

## INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

## ADVICE TO DOCTOR

For acute or short term repeated exposures to ethylene glycol:

- Early treatment of ingestion is important. Ensure emesis is satisfactory.
- Test and correct for metabolic acidosis and hypocalcaemia.
- Apply sustained diuresis when possible with hypertonic mannitol.
- Evaluate renal status and begin haemodialysis if indicated. [I.L.O]
- Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.

Laitinen J., et al: Occupational & Environmental Medicine 1996; 53, 595-600

## PRECAUTIONS FOR USE

## EXPOSURE STANDARDS

No data for House of Kolor Polyurethane Flo-Klear UFC01.

### EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m<sup>3</sup>): 431.2947 mg/m<sup>3</sup>

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component	Breathing Zone ppm	Breathing Zone mg/m <sup>3</sup>	Mixture Conc (%)
ethylene glycol monobutyl ether ac	86.2589	9	0
aromatic hydrocarbon solvent	17.25	86.2589	9
ethyl-3-ethoxypropionate	14.38	86.2589	9
xylene	19.72	86.2589	9
n-butyl acetate	18.15	86.2589	9

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

At the "Composite Exposure Standard for Mixture" (TWA) (mg/m<sup>3</sup>): 36 mg/m<sup>3</sup>

Component	Breathing Zone ppm	Breathing Zone mg/m <sup>3</sup>	Mixture Conc (%)
carbon black	23.9608	2	0

### INGREDIENT DATA

#### N-BUTYL ACETATE:

TLV TWA: 150 ppm [ACGIH]

TLV STEL: 200 ppm [ACGIH]

PEL TWA: 150 ppm, 710 mg/m<sup>3</sup> [OSHA Z1]

TLV TWA: 150 ppm, 713 mg/m<sup>3</sup>; STEL: 200 ppm, 950 mg/m<sup>3</sup>

ES TWA: 150 ppm, 713 mg/m<sup>3</sup>; STEL: 200 ppm, 950 mg/m<sup>3</sup>

OES TWA: 150 ppm, 724 mg/m<sup>3</sup>; STEL: 200 ppm, 966 mg/m<sup>3</sup>

MAK value: 100 ppm, 480 mg/m<sup>3</sup>

MAK Category I Peak Limitation: For local irritants Allows excursions of twice the MAK value for 5 minutes at a time, 8 times per shift.

MAK values, and categories and groups are those recommended within the

Federal Republic of Germany

Odour Threshold Value: 0.0063 ppm (detection), 0.038-12 ppm (recognition)

IDLH Level: 1700 ppm (lower explosive limit)

Exposure at or below the recommended TLV-TWA is thought to prevent significant irritation of the eyes and respiratory passages as well as narcotic effects. In light of the lack of substantive evidence regarding teratogenicity and a review of acute oral data a STEL is considered inappropriate.

**ETHYL-3-ETHOXYPROPIONATE:**

No exposure limits set by NOHSC or ACGIH

CEL TWA: 50 ppm, 300mg/m<sup>3</sup> [Eastman]

**XYLENE:**

TLV TWA: 100 ppm A4;BEI [ACGIH]

TLV STEL: 150 ppm A4;BEI [ACGIH]

PEL TWA: 100 ppm, 435 mg/m<sup>3</sup> [OSHA Z1]

TLV TWA: 100 ppm, 434 mg/m<sup>3</sup>; STEL: 150 ppm, 651 mg/m<sup>3</sup> A4

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans

ES TWA: 80 ppm, 350 mg/m<sup>3</sup>; STEL: 150 ppm, 655 mg/m<sup>3</sup> (Under review)

OES TWA: 100 ppm, 441 mg/m<sup>3</sup>; STEL: 150 ppm, 662 mg/m<sup>3</sup> skin

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

IDLH Level: 900 ppm

Odour Threshold Value: 20 ppm (detection), 40 ppm (recognition)

NOTE: Detector tubes for o-xylene, measuring in excess of 10 ppm, are available commercially. (m-xylene and p-xylene give almost the same response)

Xylene vapour is an irritant to the eyes, mucous membranes and skin and causes narcosis at high concentrations. Exposure to doses sufficiently high to produce intoxication and unconsciousness also produces transient liver and kidney toxicity. Neurologic impairment is NOT evident amongst volunteers inhaling up to 400 ppm though complaints of ocular and upper respiratory tract irritation occur at 200 ppm for 3 to 5 minutes.

Exposure to xylene at or below the recommended TLV-TWA and STEL is thought to minimise the risk of irritant effects and to produce neither significant narcosis or chronic injury. An earlier skin notation was deleted because percutaneous absorption is gradual and protracted and does not substantially contribute to the dose received by inhalation.

**AROMATIC HYDROCARBON SOLVENT:**

CEL TWA: 50 ppm, 250 mg/m<sup>3</sup> as total hydrocarbons [Manufacturer]

**ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE:**

TLV TWA: 20 ppm A3 [ACGIH]

TLV TWA: 20 ppm A3

CAUTION: This substance has been classified by the ACGIH as A3 Animal Carcinogen

(at relatively high doses)

MAK value: 20 ppm, 130 mg/m<sup>3</sup> (skin)

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

Designated H in List of MAK values: Danger of cutaneous absorption.

Absorption of such substances through the skin can pose an incomparably larger danger of toxicity than their inhalation. To avoid health risks when handling such substances, meticulous cleaning of the skin, hair and clothing is imperative.

MAK Category II Peak Limitation: For substances with systemic effects and with a half-life in humans of less than two hours.

Allows excursions of 2 times the MAK value, for 30 minutes (on average), four times per shift.

MAK Group C: There is no reason to fear risk of damage to the developing embryo when MAK and BAT values are observed.

MAK values, and categories and groups are those recommended within the Federal Republic of Germany

Threshold odour concentration: 50% recognition, 0.64 ppm.

Toxic doses cause red blood cell lysis, and in consequence, haemoglobinuria and sometimes, kidney damage.

#### CARBON BLACK:

PEL TWA: 3.5 mg/m<sup>3</sup> [OSHA Z1]

TLV TWA: 3.5 mg/m<sup>3</sup> A4

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans

ES TWA: 3 mg/m<sup>3</sup>

OES TWA: 3.5 mg/m<sup>3</sup>; STEL: 7 mg/m<sup>3</sup>

IDLH Level: 1750 mg/m<sup>3</sup>

The TLV-TWA is recommended to minimise complaints of excessive dirtiness and applies only to commercially produced carbon blacks or to soots derived from combustion sources containing absorbed polycyclic aromatic hydrocarbons (PAHs). When PAHs are present in carbon black (measured as the cyclohexane-extractable fraction) NIOSH has established a REL-TWA of 0.1 mg/m<sup>3</sup> and considers the material to be an occupational carcinogen. The NIOSH REL-TWA was "selected on the basis of professional judgement rather than on data delineating safe from unsafe concentrations of PAHs". This limit was justified on the basis of feasibility of measurement and not on a demonstration of its safety.

#### 1-NITROPROPANE:

TLV TWA: 25 ppm A4 [ACGIH]

PEL TWA: 25 ppm, 90 mg/m<sup>3</sup> [OSHA Z1]

TLV TWA: 25 ppm, 91 mg/m<sup>3</sup> A4

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans

ES TWA: 25 ppm, 90 mg/m<sup>3</sup>

OES TWA: 25 ppm, 93 mg/m<sup>3</sup>

MAK value: 25 ppm, 92 mg/m<sup>3</sup>

IDLH Level: 1000 ppm

Odour Threshold: 140 ppm (detection)

Respiratory tract irritation and liver damage have been documented in animals exposed to 1-nitropropane. Although there is no evidence to suggest that 1-nitropropane is carcinogenic (as is 2-nitropropane) the recommended TLV-TWA should be employed with discretion.

#### N-METHYL-2-PYRROLIDONE:

ES TWA: 25 ppm, 103 mg/m<sup>3</sup>; STEL: 75 ppm, 309 mg/m<sup>3</sup> SKIN

OES TWA: 25 ppm, 103 mg/m<sup>3</sup>; STEL: 75 ppm, 309 mg/m<sup>3</sup> SKIN

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

WEEL TWA: 10 ppm, 40 mg/m<sup>3</sup> recommended - under review 1994

REL TWA: 100 ppm, [GAF]

MAK value: 19 ppm, 80 mg/m<sup>3</sup>

Designated H in List of MAK values: Danger of cutaneous absorption.

Absorption of such substances through the skin can pose an incomparably larger danger of toxicity than their inhalation. To avoid health risks when handling such substances, meticulous cleaning of the skin, hair and clothing is imperative.

MAK Category II Peak Limitation: For substances with systemic effects and with a half-life in humans ranging from two hours to shift-length.

Allows excursions of 5 times the MAK value, for 30 minutes (on average), twice per shift.

MAK Group C: There is no reason to fear risk of damage to the developing embryo when MAK and BAT values are observed.

MAK values, and categories and groups are those recommended within the Federal Republic of Germany

Reports of skin and eye irritation and chronic headaches have been reported in workers exposed to 1-methyl-2-pyrrolidone. The Australian ES is based on a 10-fold uncertainty factor of the no-observable-adverse-effect level (NOAEL) of 24 ppm where adverse respiratory effects were observed in a 4-week inhalation study in rats.

#### ETHYLBENZENE:

TLV TWA: 100 ppm A3; BEI [ACGIH]

TLV STEL: 125 ppm A3; BEI [ACGIH]

PEL TWA: 100 ppm, 435 mg/m<sup>3</sup> [OSHA Z1]

TLV TWA: 100 ppm; STEL: 125 ppm A3

CAUTION: This substance has been classified by the ACGIH as A3 Animal Carcinogen (at relatively high doses)

ES TWA: 100 ppm, 435 mg/m<sup>3</sup>; STEL: 125 ppm, 545 mg/m<sup>3</sup> (Under review)

OES TWA: 100 ppm, 441 mg/m<sup>3</sup>; STEL: 125 ppm, 552 mg/m<sup>3</sup>

MAK value: 100 ppm, 440 mg/m<sup>3</sup>

Designated H in List of MAK values: Danger of cutaneous absorption.

Absorption of such substances through the skin can pose an incomparably larger danger of toxicity than their inhalation. To avoid health risks when handling

such substances, meticulous cleaning of the skin, hair and clothing is imperative.

MAK Category I Peak Limitation: For local irritants Allows excursions of twice the MAK value for 5 minutes at a time, 8 times per shift.

MAK Group D: Classification as to the effect of the substance on the developing embryo/foetus is not yet possible because although data may indicate a trend, they are not sufficient for a final evaluation.

MAK values, and categories and groups are those recommended within the Federal Republic of Germany

Odour Threshold Value: 0.46-0.60 ppm

IDLH Level: 800 ppm (lower explosion limit)

NOTE: Detector tubes for ethylbenzene, measuring in excess of 30 ppm, are commercially available.

Ethyl benzene produces irritation of the skin and mucous membranes and appears to produce acute and chronic effects on the central nervous system. Animal experiments also suggest the effects of chronic exposure include damage to the liver, kidneys and testes. In spite of structural similarities to benzene, the material does not appear to cause damage to the haemopoietic system. The TLV-TWA is thought to be protective against skin and eye irritation. Exposure at this concentration probably will not result in systemic effects.

Subjects exposed at 200 ppm experienced transient irritation of the eyes; at 1000 ppm there was eye irritation with profuse lachrymation; at 200 ppm eye irritation and lachrymation were immediate and severe accompanied by moderate nasal irritation, constriction in the chest and vertigo; at 5000 ppm exposure produced intolerable irritation of the eyes and throat.

## ENGINEERING CONTROLS

For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow	1-2.5 m/s (200-500 f/min.)

booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

## **PERSONAL PROTECTION**

### **EYE**

Safety glasses with side shields  
Chemical goggles.  
Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

### **HANDS/FEET**

Wear chemical protective gloves, eg. PVC.  
Wear safety footwear or safety gumboots, eg. Rubber

### **OTHER**

Overalls.  
 PVC Apron.  
 PVC protective suit may be required if exposure severe.  
 Eyewash unit.  
 Ensure there is ready access to a safety shower.

## RESPIRATOR

Respiratory protection may be required when ANY "Worst Case" vapour-phase concentration is exceeded (see Computer Prediction in "Exposure Standards").

Protection Factor	Half-Face Respirator	Full-Face Respirator
10 x ES	ABK-AUS ABK-PAPR-AUS	-
50 x ES	Air-line*	-
100 x ES	-	ABK-3
100+ x ES	-	Air-line**

\* - Continuous-flow; \*\* - Continuous-flow or positive pressure demand

^ - Full-face

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

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## SAFE HANDLING

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## STORAGE AND TRANSPORT

### SUITABLE CONTAINER

Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. Check that containers are clearly labelled and free from leaks.

- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
  - For materials with a viscosity of at least 2680 cSt. (23 deg. C)
  - For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
  - Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C)
- (i) : Removable head packaging;

- (ii) : Cans with friction closures and
- (iii) : low pressure tubes and cartridges may be used.
- Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages
- In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

## **STORAGE INCOMPATIBILITY**

Avoid reaction with oxidising agents

## **STORAGE REQUIREMENTS**

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- Keep containers securely sealed.
- Store away from incompatible materials in a cool, dry well ventilated area.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

## **TRANSPORTATION**

Class 3 - Flammable liquids shall not be loaded in the same vehicle or packed in the same vehicle or packed in the same freight container with:

Class 1 - Explosives;

Class 2.1 - Flammable gases (where both flammable liquids and flammable gases are in bulk);

Class 2.3 - Poisonous gases;

Class 4.2 - Spontaneously combustible substances;

Class 5.1 - Oxidising agents;

Class 5.2 - Organic peroxides;

Class 7 - Radioactive substances.

## **SPILLS AND DISPOSAL**

### **MINOR SPILLS**

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.

## MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse /absorb vapour.
- Contain spill with sand, earth or vermiculite.
- Use only spark-free shovels and explosion proof equipment.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

## DISPOSAL

- Recycle wherever possible.
  - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
  - Dispose of by: Burial in a licenced land-fill or Incineration in a licenced apparatus (after admixture with suitable combustible material)
  - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent re-use and bury at an authorised landfill.

## FIRE FIGHTERS' REPORT

## EXTINGUISHING MEDIA

Foam.  
Dry chemical powder.  
BCF (where regulations permit).  
Carbon dioxide.

Water spray or fog - Large fires only.

## **FIRE FIGHTING**

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control the fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

## **FIRE/EXPLOSION HAZARD**

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include.

carbon dioxide (CO<sub>2</sub>).

nitrogen oxides (NO<sub>x</sub>).

other pyrolysis products typical of burning organic material

## **FIRE INCOMPATIBILITY**

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

## **HAZCHEM**

3[Y]E

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## **CONTACT POINT**

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COMPANY CONTACT

(+61 2) 9737 9422

AUSTRALIAN POISONS INFORMATION CENTRE

24 HOUR SERVICE: 13 11 26

POLICE, FIRE BRIGADE OR AMBULANCE: 000

NEW ZEALAND POISONS INFORMATION CENTRE

24 HOUR SERVICE: 0800 764 766

NZ EMERGENCY SERVICES: 111

End of Report

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