

HOUSE OF KOLOR WAX AND GREASE REMOVER KC-10

ChemWatch Material Safety Data Sheet

CHEMWATCH 5090-77

Date of Issue: Tue 12-Aug-2003

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS ACCORDING TO WORKSAFE AUSTRALIA CRITERIA.

SUPPLIER

Company:

Meguiar's Australia P/L

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AUS

Telephone: (+61 2) 9737 9422

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SYNONYMS

wax grease remover cleaner

SHIPPING NAME

PAINT RELATED MATERIAL None

Product Name: House of Kolor Wax and Grease Remover KC-10

Other Names: Product Code: KC-10

06/03

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

Clear colourless flammable liquid with an organic solvent odour; does not mix with water.

Boiling Point (°C): 82-140
 Melting Point (°C): Not Available
 Vapour Pressure (kPa): Not Available
 Specific Gravity: 0.77
 Flash Point (°C): 10 (TCC)
 Lower Explosive Limit (%): 0.9
 Upper Explosive Limit (%): 12
 Solubility in Water (g/L): Immiscible

INGREDIENTS

NAME	CAS RN	%
naphtha petroleum, light aliphatic solvent	64742-89-8.	>60
xylene	1330-20-7	10-20
ethylbenzene	100-41-4	1-5
isopropanol	67-63-0	1-5
toluene	108-88-3	<1

HEALTH HAZARD

ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be damaging to the health of the individual; animal experiments indicate that ingestion of less than 150 gram may be fatal.

Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result.

(ICSC13733).

Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney. Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms. One epidemiological study of petroleum refinery workers has reported elevations in standard mortality ratios for skin cancer along with a dose-response relationship indicating an association between routine workplace exposure to petroleum or one of its constituents and skin cancer, particularly melanoma. Other studies have been unable to confirm this finding.

Ingestion of petroleum hydrocarbons may produce irritation of the pharynx, oesophagus, stomach and small intestine with oedema and mucosal ulceration resulting; symptoms include a burning sensation in the mouth and throat. Large amounts may produce narcosis with nausea and vomiting, weakness or dizziness, slow and shallow respiration, swelling of the abdomen, unconsciousness and convulsions. Myocardial injury may produce arrhythmias, ventricular fibrillation and electrocardiographic changes. Central nervous system depression may also occur. Light aromatic hydrocarbons produce a warm, sharp, tingling sensation on contact with taste buds and may anaesthetise the tongue. Aspiration into the lungs may produce coughing, gagging and a chemical pneumonitis with pulmonary oedema and haemorrhage.

Considered an unlikely route of entry in commercial/industrial environments The liquid may produce considerable gastrointestinal discomfort and may be harmful or toxic if swallowed. Ingestion may result in nausea, pain and vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis

EYE

Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate.

Repeated or prolonged exposure to irritants may produce conjunctivitis. Petroleum hydrocarbons may produce pain after direct contact with the eyes. Slight, but transient disturbances of the corneal epithelium may also result. The aromatic fraction may produce irritation and lachrymation. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.

SKIN

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. The material may accentuate any pre-existing dermatitis condition. 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. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

INHALED

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material may produce respiratory tract irritation. Symptoms of pulmonary irritation may include coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and a burning sensation. Unlike most organs, the lung can respond to a chemical insult or a chemical agent, by first removing or neutralising the irritant and then repairing the damage (inflammation of the lungs may be a consequence). The repair process (which initially developed to protect mammalian lungs from foreign matter and antigens) may, however, cause further damage to the lungs (fibrosis for example) when activated by hazardous chemicals. Often, this results in an impairment of gas exchange, the primary function of the lungs. Therefore prolonged exposure to respiratory irritants may cause sustained

breathing difficulties.

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, drowsiness, reduced alertness, loss of reflexes, lack of coordination and vertigo.

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

Xylene is a central nervous system depressant. Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

Headache, fatigue, lassitude, irritability and gastrointestinal disturbances (e.g., nausea, anorexia and flatulence) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers. Transient memory loss, renal impairment, temporary confusion and some evidence of disturbance of liver function was reported in three workers overcome by gross exposure to xylene (10000 ppm). One worker died and autopsy revealed pulmonary congestion, oedema and focal alveolar haemorrhage. Volunteers inhaling xylene at 100 ppm for 5 to 6 hours showed changes in manual coordination reaction time and slight ataxia. Tolerance developed during the workweek but was lost over the weekend. Physical exercise may antagonise this effect. Xylene body burden in humans exposed to 100 or 200 ppm xylene in air depends on the amount of body fat with 4% to 8% of total absorbed xylene accumulating in adipose tissue.

CHRONIC HEALTH EFFECTS

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

Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney. Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms. One epidemiological study of petroleum refinery workers has reported elevations in standard mortality ratios for skin cancer along with a dose-response relationship indicating an association between routine workplace exposure to petroleum or one of its constituents and skin cancer, particularly melanoma. Other studies have been unable to confirm this finding.

FIRST AID

SWALLOWED

If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

Avoid giving milk or oils.

Avoid giving alcohol.

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

Treat symptomatically.

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

For acute or short term repeated exposures to xylene:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.
- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases ($pO_2 < 50$ mm Hg or $pCO_2 > 50$ mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippu-ric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift	

PRECAUTIONS FOR USE

EXPOSURE STANDARDS

No data for House of Kolor Wax and Grease Remover KC-10.

EXPOSURE STANDARDS FOR MIXTURE

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

Composite Exposure Standard for Mixture (TWA) (mg/m³): 1032.2212 mg/m³

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 ³	
Mixture Conc: (%)			
ethylbenzene	51.6111	5	0
isopropanol	51.6111	5	0
toluene	2.7	10.3222	1
xylene	47.19	206.4442	20
naphtha petroleum, light aliphatic	178.06	712.2326	69

INGREDIENT DATA

NAPHTHA PETROLEUM, LIGHT ALIPHATIC SOLVENT:

REL TWA: 370 ppm

[SHELL]

for petroleum distillates:

CEL TWA: 500 ppm, 2000 mg/m³ (compare OSHA TWA)

XYLENE:

TLV TWA: 100 ppm A4;BEI [ACGIH]

TLV STEL: 150 ppm A4;BEI [ACGIH]

PEL TWA: 100 ppm, 435 mg/m³ [OSHA Z1]

TLV TWA: 100 ppm, 434 mg/m³; STEL: 150 ppm, 651 mg/m³ 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/m³; STEL: 150 ppm, 655 mg/m³ (Under review)

OES TWA: 100 ppm, 441 mg/m³; STEL: 150 ppm, 662 mg/m³ 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.

ETHYLBENZENE:

TLV TWA: 100 ppm A3; BEI [ACGIH]

TLV STEL: 125 ppm A3; BEI [ACGIH]

PEL TWA: 100 ppm, 435 mg/m³ [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/m³; STEL: 125 ppm, 545 mg/m³ (Under review)

OES TWA: 100 ppm, 441 mg/m³; STEL: 125 ppm, 552 mg/m³

MAK value: 100 ppm, 440 mg/m³

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.

ISOPROPANOL:

NOTICE OF INTENDED CHANGE

TLV TWA: 400 ppm [ACGIH]

TLV STEL: NOTICE OF INTENDED CHANGE 500 ppm [ACGIH]

TLV TWA: 200 ppm A4 [ACGIH]

TLV STEL: 400 ppm A4 [ACGIH]

PEL TWA: 400 ppm, 980 mg/m³ [OSHA Z1]

TLV TWA: 200 ppm; STEL: 400 ppm A4

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

ES TWA: 400 ppm, 980 mg/m³; STEL: 500 ppm, 1225 mg/m³ (Under review)

OES TWA: 400 ppm, 999 mg/m³; STEL: 500 ppm, 1250 mg/m³

MAK value: 200 ppm, 500 mg/m³

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

IDLH Level: 2000 ppm (lower explosive limit)

Odour Threshold Value: 3.3 ppm (detection), 7.6 ppm (recognition)

Exposure at or below the recommended TLV-TWA and STEL is thought to minimise the potential for inducing narcotic effects or significant irritation of the eyes or upper respiratory tract. It is believed, in the absence of hard evidence, that this limit also provides protection against the development of chronic health effects. The limit is intermediate to that set for ethanol, which is less toxic, and n-propyl alcohol, which is more toxic, than isopropanol.

TOLUENE:

TLV TWA: 50 ppm Skin;A4;BEI [ACGIH]

PEL: 8hr TWA 200 ppm ; Ceiling Conc: 300ppm ; Max excursion: 500 ppm for 10 minutes [OSHA Z2]

ES TWA: 50 ppm, 191 mg/m³; STEL 150 ppm, 574 mg/m³ SKIN

TLV TWA: 50 ppm, 188 mg/m³ SKIN A4

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

OES TWA: 50 ppm, 191 mg/m³; STEL: 150 ppm, 574 mg/m³ SKIN

MAK value: 50 ppm, 190 mg/m³

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

IDLH Level: 500 ppm

Odour Threshold Value: 0.16-6.7 (detection), 1.9-69 (recognition)

NOTE: Detector tubes measuring in excess of 5 ppm, are available.

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.

High concentrations of toluene in the air produce depression of the central nervous system (CNS) in humans. Intentional toluene exposure (glue-sniffing) at maternally-intoxicating concentration has also produced birth defects. Foetotoxicity appears at levels associated with CNS narcosis and probably occurs only in those with chronic toluene-induced kidney failure. Exposure at or below the recommended TLV-TWA is thought to prevent transient headache and irritation, to provide a measure of safety for possible disturbances to human reproduction, the prevention of reductions in cognitive responses reported amongst humans inhaling greater than 40 ppm, and the significant risks of hepatotoxic, behavioural and nervous system effects (including impaired reaction time and incoordination). Although toluene/ethanol interactions are well recognised, the degree of protection afforded by the TLV-TWA among drinkers is not known.

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 booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

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. DO NOT wear contact lenses.

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 (Min)	Half-Face Respirator	Full-Face Respirator
10 x ES	Air-line*	A-2
	-	A-PAPR-2
20 x ES	-	A-3
20+ 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.

SAFE HANDLING

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 (CO₂).

other pyrolysis products typical of burning organic material.

Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

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

CONTACT POINT

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
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End of Report

Issue Date: Tue 12-Aug-2003

Print Date: Mon 25-Aug-2003

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