

POLYTHANE BRUSH CLEAN

RESENE PAINTS LTD

Chemwatch: 9-70453
Version No: 1.2
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 2

Issue Date: 11/07/2014
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Initial Date: 11/07/2014
S.GHS.NZLEN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

| | |
|-------------------------------|--|
| Product name | POLYTHANE BRUSH CLEAN |
| Chemical Name | Not Applicable |
| Synonyms | 3614 |
| Proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| Chemical formula | Not Applicable |
| Other means of identification | Not Available |
| CAS number | Not Applicable |

Relevant identified uses of the substance or mixture and uses advised against

| | |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---|

Details of the manufacturer/importer

| | | | |
|-------------------------|---|--|--|
| Registered company name | RESENE PAINTS LTD | | |
| Address | 32-50 Vogel Street, Lower Hutt, Wellington New Zealand | | |
| Telephone | +64 4 5770500 | | |
| Fax | +64 4 5773327 | | |
| Website | www.resene.co.nz | | |
| Email | advice@resene.co.nz | | |

Emergency telephone number

| | | | |
|-----------------------------------|---------------|--|--|
| Association / Organisation | Not Available | | |
| Emergency telephone numbers | 0800 737363 | | |
| Other emergency telephone numbers | 0800 737363 | | |

CHEMWATCH EMERGENCY RESPONSE

| Primary Number | Alternative Number 1 | Alternative Number 2 |
|----------------|----------------------|----------------------|
| +800 2436 2255 | +612 9186 1132 | Not Available |

Once connected and if the message is not in your preferred language then please dial 01


SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.
Classified as Dangerous Goods for transport purposes.

| | |
|---|---|
| GHS Classification [1] | Flammable Liquid Category 3, Flammable Solid Category 2, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, STOT - SE (Narcosis) Category 3, Acute Aquatic Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |
| Determined by Chemwatch using GHS/HSNO criteria | 3.1C, 4.1.1B, 6.1D (dermal), 6.1D (inhalation), 6.3A, 6.4A, 6.9 (narcotic), 9.1D |

Label elements

| | |
|--------------------|---|
| GHS label elements |   |
|--------------------|---|

POLYTHANE BRUSH CLEAN

SIGNAL WORD

WARNING

Hazard statement(s)

| | |
|------|-----------------------------------|
| H226 | Flammable liquid and vapour |
| H228 | Flammable solid |
| H312 | Harmful in contact with skin |
| H332 | Harmful if inhaled |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H336 | May cause drowsiness or dizziness |
| H402 | Harmful to aquatic life |

Precautionary statement(s): Prevention

| | |
|------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
|------|--|

Precautionary statement(s): Response

| | |
|------|--|
| P321 | Specific treatment (see advice on this label). |
|------|--|

Precautionary statement(s): Storage

| | |
|-----------|--|
| P403+P235 | Store in a well-ventilated place. Keep cool. |
|-----------|--|

Precautionary statement(s): Disposal

| | |
|------|--|
| P501 | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |
|------|--|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|---|
| 64-17-5 | <10 | alcohol, denatured |
| 67-56-1 | <1 | methanol |
| 109-59-1 | 20-40 | ethylene glycol monoisopropyl ether |
| 1330-20-7 | <50 | xylene |
| 123-86-4 | 20-40 | n-butyl acetate |

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

| | |
|--------------|--|
| Eye Contact | <ul style="list-style-type: none">Generally not applicable. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none">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. |
| Inhalation | <ul style="list-style-type: none">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. |
| Ingestion | <ul style="list-style-type: none">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.If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |

Indication of any immediate medical attention and special treatment needed

| | |
|--|---|
| | Followed acute or short term repeated exposures to ethylene glycol monoalkyl ethers and their acetates: |
|--|---|

Continued...

POLYTHANE BRUSH CLEAN

- ▶ Hepatic metabolism produces ethylene glycol as a metabolite.
- ▶ Clinical presentation, following severe intoxication, resembles that of ethylene glycol exposures.
- ▶ Monitoring the urinary excretion of the alkoxyacetic acid metabolites may be a useful indication of exposure.
[Ellenhorn and Barceloux: Medical Toxicology]

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 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

for simple esters:

BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ Monitor and treat, where necessary, for pulmonary oedema.
- ▶ Monitor and treat, where necessary, for shock.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Give activated charcoal.

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. *EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed.* 1994

For acute and short term repeated exposures to methanol:

- ▶ Toxicity results from accumulation of formaldehyde/formic acid.
- ▶ Clinical signs are usually limited to CNS, eyes and GI tract. Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- ▶ Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- ▶ Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- ▶ Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 mEq/L).
- ▶ Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- ▶ Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment.
- ▶ 8-Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

| Determinant | Index | Sampling Time | Comment |
|-------------|-------|---------------|---------|
|-------------|-------|---------------|---------|

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| | | | |
|-------------------------|---------------------|-------------------------------------|-------|
| 1. Methanol in urine | 15 mg/l | End of shift | B, NS |
| 2. Formic acid in urine | 80 mg/gm creatinine | Before the shift at end of workweek | B, NS |

B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

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 (pO₂ < 50 mm Hg or pCO₂ > 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 | |

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Foam.

Special hazards arising from the substrate or mixture

Fire Incompatibility

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

Advice for firefighters

Fire Fighting

- ▶ Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard

- ▶ Liquid and vapour are flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

- ▶ Clean up all spills immediately.

Major Spills

- ▶ Clear area of personnel and move upwind.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- ▶ Containers, even those that have been emptied, may contain explosive vapours.

Other information

- ▶ Store in original containers in approved flammable liquid storage area.

Conditions for safe storage, including any incompatibilities

Suitable container

- ▶ Packing as supplied by manufacturer.

Storage incompatibility

n-Butyl acetate:

- ▶ reacts with water on standing to form acetic acid and n-butyl alcohol
- ▶ reacts violently with strong oxidisers and potassium tert-butoxide
- ▶ is incompatible with caustics, strong acids and nitrates
- ▶ dissolves rubber, many plastics, resins and some coatings
- ▶ Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

Continued...

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA






| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|-------------------------------------|---------------------------------|-----------------------------------|---------------------------------|---------------|---|
| New Zealand Workplace Exposure Standards (WES) | alcohol, denatured | Ethyl alcohol | 1880 mg/m ³ / 1000 ppm | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | methanol | Methyl alcohol | 262 mg/m ³ / 200 ppm | 328 mg/m ³ / 250 ppm | Not Available | Skin absorption; Exposure can also be estimated by biological monitoring. |
| New Zealand Workplace Exposure Standards (WES) | ethylene glycol monoisopropyl ether | Ethylene glycol isopropyl ether | 106 mg/m ³ / 25 ppm | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | xylene | Xylene (o-, m-, p-isomers) | 217 mg/m ³ / 50 ppm | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | n-butyl acetate | n-Butyl acetate | 713 mg/m ³ / 150 ppm | 950 mg/m ³ / 200 ppm | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | TEEL-0 | TEEL-1 | TEEL-2 | TEEL-3 |
|--------------------|----------|----------|----------|----------|
| alcohol, denatured | 1000 ppm | 3000 ppm | 3300 ppm | 3300 ppm |
| methanol | 200 ppm | 530 ppm | 2100 ppm | 7200 ppm |
| xylene | 100 ppm | 130 ppm | 920 ppm | 2500 ppm |
| n-butyl acetate | 5 ppm | 5 ppm | 200 ppm | 3000 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|-------------------------------------|---------------|-----------------|
| alcohol, denatured | 15,000 ppm | 3,300 [LEL] ppm |
| methanol | 25,000 ppm | 6,000 ppm |
| ethylene glycol monoisopropyl ether | Not Available | Not Available |
| xylene | 1,000 ppm | 900 ppm |
| n-butyl acetate | 10,000 ppm | 1,700 [LEL] ppm |

Exposure controls

| | |
|----------------------------------|--|
| Appropriate engineering controls | CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| Personal protection |      |
| Eye and face protection | ► Safety glasses with side shields. |
| Skin protection | See Hand protection below |
| Hands/feet protection | ► Wear chemical protective gloves, e.g. PVC. |
| Body protection | See Other protection below |
| Other protection | ► Overalls. |
| Thermal hazards | Not Available |

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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| Material | CPI |
|----------------|-----|
| PE/EVAL/PE | A |
| BUTYL | C |
| BUTYL/NEOPRENE | C |
| NEOPRENE | C |
| NITRILE | C |
| NITRILE+PVC | C |

Respiratory protection

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES | AX-AUS / Class 1 | - | AX-PAPR-AUS / Class 1 |
| up to 25 x ES | Air-line* | AX-2 | AX-PAPR-2 |

POLYTHANE BRUSH CLEAN

| | |
|------------------|---|
| PVA | C |
| PVC | C |
| PVDC/PE/PVDC | C |
| SARANEX-23 2-PLY | C |
| SARANEX-23 | C |
| TEFLON | C |
| VITON | C |
| VITON/NEOPRENE | C |

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

| | | | |
|---------------|---|------------|---|
| up to 50 x ES | - | AX-3 | - |
| 50+ x ES | - | Air-line** | - |

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|---------------|--|---------------|
| Appearance | clear liquid | | |
| Physical state | article | Relative density (Water = 1) | 0.874 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 354 |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | 128 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | 29 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Flammable. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | 7.4 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 1.3 | Volatile Component (%vol) | 100 |
| Vapour pressure (kPa) | 1.3 | Gas group | Not Available |
| Solubility in water (g/L) | Immiscible | pH as a solution(1%) | Not Available |
| Vapour density (Air = 1) | 3.0 | VOC g/L | 874 |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity | See section 7 |
| Chemical stability | ► Unstable in the presence of incompatible materials. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

| | |
|---------------------|--|
| Inhaled | Inhalation of vapours may cause drowsiness and dizziness. |
| Ingestion | Accidental ingestion of the material may be damaging to the health of the individual. |
| Skin Contact | Skin contact with the material may be harmful; systemic effects may result following absorption. |
| 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. |
| Chronic | On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment. |



| | | |
|------------------------------|-----------------|-------------------|
| POLYTHANE BRUSH CLEAN | TOXICITY | IRRITATION |
|------------------------------|-----------------|-------------------|

POLYTHANE BRUSH CLEAN

| | | |
|-------------------------------------|--|-------------------------------------|
| | Not Available | Not Available |
| alcohol, denatured | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| methanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 15800 mg/kg | Eye (rabbit): 100 mg/24h-moderate |
| | Inhalation (rat) LC50: 64000 ppm/4h | Eye (rabbit): 40 mg-moderate |
| | Oral (rat) LD50: 5628 mg/kg | Skin (rabbit): 20 mg/24 h-moderate |
| | Not Available | Not Available |
| ethylene glycol monoisopropyl ether | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 1600 mg/kg | Eye (rabbit): 500 mg/24h - mild |
| | Inhalation (mouse) LC50: 1930 ppm/7h | SKIN (RABBIT): 20 MG/24H - moderate |
| | Inhalation (rat) LC50: 3100 mg/m3/4h | |
| | Intraperitoneal (mouse) LD50: 1860 mg/kg | |
| | Intraperitoneal (rat) LD50: 800 mg/kg | |
| | Oral (mouse) LD50: 4900 mg/kg | |
| | Oral (rat) LD50: 5660 mg/kg | |
| xylene | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: 5000 ppm/4h | Eye (human): 200 ppm irritant |
| | Intraperitoneal (Mouse) LD50: 1548 mg/kg | Eye (rabbit): 5 mg/24h SEVERE |
| | Intraperitoneal (Rat) LD50: 2459 mg/kg | Eye (rabbit): 87 mg mild |
| | Oral (Mouse) LD50: 2119 mg/kg | Skin (rabbit):500 mg/24h moderate |
| | Oral (rat) LD50: 4300 mg/kg | |
| | Subcutaneous (Rat) LD50: 1700 mg/kg | |
| | Not Available | Not Available |
| n-butyl acetate | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 3200 mg/kg* | * [PPG] |
| | Inhalation (rat) LC50: 2000 ppm/4H | Eye (human): 300 mg |
| | Inhalation (Rat) LC50: 390 ppm/4h | Eye (rabbit): 20 mg (open)-SEVERE |
| | Intraperitoneal (Mouse) LD50: 1230 mg/kg | Eye (rabbit): 20 mg/24h - moderate |
| | Oral (Guinea pig) LD50: 4700 mg/kg | Skin (rabbit): 500 mg/24h-moderate |
| | Oral (Rabbit) LD50: 3200 mg/kg | |
| | Oral (Rat) LD50: 10768 mg/kg | |
| | Oral (rat) LD50: 13100 mg/kg | |
| | Not Available | Not Available |

| | |
|--|---|
| METHANOL | The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). |
| ETHYLENE GLYCOL MONOISOPROPYL ETHER | The material may be irritating to the eye, with prolonged contact causing inflammation. Somnolence, excitement, analgesia, dyspnea, respiratory tract changes, haematuria recorded. |
| XYLENE | Reproductive effector in rats |
| POLYTHANE BRUSH CLEAN, ALCOHOL, DENATURED, XYLENE, N-BUTYL ACETATE | The material may produce severe irritation to the eye causing pronounced inflammation. |

| | | | |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity | ✓ | Carcinogenicity | ⊗ |
| Skin Irritation/Corrosion | ✓ | Reproductivity | ⊗ |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✓ |
| Respiratory or Skin sensitisation | ⊗ | STOT - Repeated Exposure | ⊗ |
| Mutagenicity | ⊗ | Aspiration Hazard | ⊗ |

Legend.  - Data required to make classification available
- Data available but does not fill the criteria for classification
 - Data Not Available to make classification

CMR STATUS

| | | | |
|------|----------|---|-----------------|
| SKIN | methanol | New Zealand Workplace Exposure Standards (WES) - Skin | Skin absorption |
|------|----------|---|-----------------|

SECTION 12 ECOLOGICAL INFORMATION

Toxicity
Harmful to aquatic organisms.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---------------|-------------------------|------------------|
| Not Available | Not Available | Not Available |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---------------|-----------------|
| Not Available | Not Available |

Mobility in soil

| Ingredient | Mobility |
|---------------|---------------|
| Not Available | Not Available |


SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|------------------------------|--|
| Product / Packaging disposal | Containers may still present a chemical hazard/ danger when empty. |
| | Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001. |

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant | NO |
| HAZCHEM | +3Y |

Land transport (UN)

| | |
|------------------------------|--|
| UN number | 1263 |
| Packing group | III |
| UN proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| Environmental hazard | No relevant data |
| Transport hazard class(es) | Class : 3 Subrisk : Not Applicable |
| Special precautions for user | Special provisions : 163;223;367 Limited quantity : 5 L |

Air transport (ICAO-IATA / DGR)

| | |
|-------------------------|---|
| UN number | 1263 |
| Packing group | III |
| UN proper shipping name | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |
| Environmental hazard | No relevant data |

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| | | |
|------------------------------|---|----------------|
| Transport hazard class(es) | ICAO/IATA Class | 3 |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | 3L |
| Special precautions for user | Special provisions | A3A72 |
| | Cargo Only Packing Instructions | 366 |
| | Cargo Only Maximum Qty / Pack | 220 L |
| | Passenger and Cargo Packing Instructions | 355 |
| | Passenger and Cargo Maximum Qty / Pack | 60 L |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y344 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 10 L |

Sea transport (IMDG-Code / GGVSee)

| | | | |
|------------------------------|--|---|----------------|
| UN number | 1263 | | |
| Packing group | III | | |
| UN proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) | | |
| Environmental hazard | No relevant data | | |
| Transport hazard class(es) | IMDG Class | : | 3 |
| | IMDG Subrisk | : | Not Applicable |
| Special precautions for user | EMS Number | : | F-E , S-E |
| | Special provisions | : | 163 223 955 |
| | Limited Quantities | : | 5 L |

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

| Source | Ingredient | Pollution Category |
|---|-----------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | methanol | Y |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | xylene | Y |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | n-butyl acetate | Y |

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

| | |
|------------|--|
| HSR Number | Group Standard |
| HSR002650 | Solvents (Flammable) Group Standard 2006 |

| | |
|--|--|
| alcohol, denatured(64-17-5) is found on the following regulatory lists | "International Council of Chemical Associations (ICCA) - High Production Volume List", "IOFI Global Reference List of Chemically Defined Substances", "International Maritime Dangerous Goods Requirements (IMDG Code)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (French)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (Korean)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "FisherTransport Information", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavours", "OSPAR National List of Candidates for Substitution - Norway", "WHO Model List of Essential Medicines - Adults", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "UNECE - Kiev Protocol on Pollutant Release and Transfer Registers - Annex II", "World Anti-Doping Agency - The 2014 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Competition (German)", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "FEMA Generally Recognized as Safe (GRAS) Flavoring Substances 23 - Examples of FEMA GRAS Substances with Non-Flavor Functions", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "Acros Transport Information" |
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| | |
|--|---|
| methanol(67-56-1) is found on the following regulatory lists | "International Council of Chemical Associations (ICCA) - High Production Volume List", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Maritime Dangerous Goods Requirements (IMDG Code)", "IMDG Code - Medical First Aid Guide for use in accidents involving Dangerous Goods (MFAG) - Appendix 15 List Of Substances", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "FisherTransport Information", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "New Zealand Cosmetic Products Group Standard - Schedule 5 - Table 1: Components Cosmetic Products Must Not Contain Except Subject to the Restrictions and Conditions Laid Down", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "Acros Transport Information" |
| ethylene glycol monoisopropyl ether(109-59-1) is found on the following regulatory lists | "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "FisherTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OSPAR National List of Candidates for Substitution – Norway", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "IMO IBC Code Chapter 17: Summary of minimum requirements" |
| xylene(1330-20-7) is found on the following regulatory lists | "International Council of Chemical Associations (ICCA) - High Production Volume List", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "OSPAR List of Chemicals for Priority Action", "IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "FisherTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "UNECE - Kiev Protocol on Pollutant Release and Transfer Registers - Annex II", "OECD Existing Chemicals Database", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)" |
| n-butyl acetate(123-86-4) is found on the following regulatory lists | "International Council of Chemical Associations (ICCA) - High Production Volume List", "IOFI Global Reference List of Chemically Defined Substances", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "FisherTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavourings", "OSPAR National List of Candidates for Substitution – Norway", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "Acros Transport Information" |

Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations a location test certificate is required when quantity greater than or equal to those indicated below are present.

| Hazard Class | Quantity beyond which controls apply for closed containers | Quantity beyond which controls apply when use occurring in open containers |
|--------------|--|--|
| 3.1C | 500 L in containers greater than 5 L 1500 L in containers up to and including 5 L | 250 L 250 L |
| 4.1.1B | 100 kg | 100 kg |

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

| Class of substance | Quantities |
|--------------------|----------------|
| Not Applicable | Not Applicable |

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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