



Alu HT #823-2618

RS Components Pty Ltd

Chemwatch: 5155-86
Version No: 4.1.1.1
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: 18/12/2015
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L.GHS.AUS.EN

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

Product Identifier

| | |
|-------------------------------|------------------|
| Product name | Alu HT #823-2618 |
| Synonyms | Not Available |
| Proper shipping name | AEROSOLS |
| Other means of identification | Not Available |

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

| | |
|--------------------------|---|
| Relevant identified uses | Application is by spray atomisation from a hand held aerosol pack Anti Corrosion Products. |
|--------------------------|---|

Details of the supplier of the safety data sheet

| | |
|-------------------------|-------------------------------------|
| Registered company name | RS Components Pty Ltd |
| Address | 25 Pavesi Street NSW 2164 Australia |
| Telephone | 1300 656 636 |
| Fax | 1300 656 696 |
| Website | Not Available |
| Email | Not Available |

Emergency telephone number

| | |
|-----------------------------------|---------------|
| Association / Organisation | Not Available |
| Emergency telephone numbers | 1800 039 008 |
| Other emergency telephone numbers | 03 95733112 |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|--------------|-----|-----|
| Flammability | 3 | 4 |
| Toxicity | 1 | 2 |
| Body Contact | 2 | 3 |
| Reactivity | 1 | 2 |
| Chronic | 0 | 1 |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|--------------------|--|
| Poisons Schedule | Not Applicable |
| Classification [1] | Aerosols Category 1, Gas under Pressure (Compressed gas), Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

Label elements

Continued...

Alu HT #823-2618

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

| | |
|-------------|---------------|
| SIGNAL WORD | DANGER |
|-------------|---------------|

Hazard statement(s)

| | |
|---------------|---|
| H222 | Extremely flammable aerosol. |
| H280 | Contains gas under pressure; may explode if heated. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H412 | Harmful to aquatic life with long lasting effects. |
| AUH044 | Risk of explosion if heated under confinement |
| AUH066 | Repeated exposure may cause skin dryness and cracking |

Precautionary statement(s) Prevention

| | |
|-------------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Pressurized container: Do not pierce or burn, even after use. |
| P271 | Use only outdoors or in a well-ventilated area. |

Precautionary statement(s) Response

| | |
|-----------------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |

Precautionary statement(s) Storage

| | |
|------------------|--|
| P405 | Store locked up. |
| P410+P403 | Protect from sunlight. Store in a well-ventilated place. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

Precautionary statement(s) Disposal

| | |
|-------------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|-------------|---|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-------------|-----------|--|
| 67-64-1 | 5-10 | <u>acetone</u> |
| 7429-90-5 | 1-10 | <u>aluminium powder coated</u> |
| 108-65-6 | <10 | <u>propylene glycol monomethyl ether acetate, alpha-isomer</u> |
| 123-86-4 | 1-5 | <u>n-butyl acetate</u> |
| 1330-20-7 | 1-5 | <u>xylene</u> |
| 64742-82-1. | 1-5 | <u>naphtha, petroleum, hydrodesulfurised heavy</u> |
| 71-36-3 | 1-5 | <u>n-butanol</u> |
| 78-83-1 | 0-1 | <u>isobutanol</u> |
| 67-56-1 | 0-1 | <u>methanol</u> |
| 115-10-6 | 30-60 | <u>dimethyl ether</u> |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

| | |
|--------------------|---|
| Eye Contact | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes 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. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
|--------------------|---|

| | |
|---------------------|---|
| Skin Contact | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Remove any adhering solids with industrial skin cleansing cream. ▶ DO NOT use solvents. ▶ Seek medical attention in the event of irritation. |
| Inhalation | <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> ▶ Remove to fresh air. ▶ 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. ▶ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, 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"> ▶ Avoid giving milk or oils. ▶ Avoid giving alcohol. ▶ Not considered a normal route of entry. ▶ 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

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

SMALL FIRE:

- ▶ Water spray, dry chemical or CO2

LARGE FIRE:

- ▶ Water spray or fog.

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 | <ul style="list-style-type: none"> ▶ 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. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Liquid and vapour are highly flammable. ▶ Severe fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. ▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark. <p>Combustion products include:</p> <ul style="list-style-type: none"> · carbon dioxide (CO2) · other pyrolysis products typical of burning organic material. <p>Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.</p> <p>When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles.</p> |
| HAZCHEM | Not Applicable |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Wear protective clothing, impervious gloves and safety glasses. ▶ Shut off all possible sources of ignition and increase ventilation. |
| Major Spills | <ul style="list-style-type: none"> ▶ 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. |

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|----------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. |
|----------------------|--|

| | |
|--------------------------|--|
| | <ul style="list-style-type: none"> ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. |
| Other information | <ul style="list-style-type: none"> ▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can ▶ Store in original containers in approved flammable liquid storage area. ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped. ▶ No smoking, naked lights, heat or ignition sources. ▶ Keep containers securely sealed. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Aerosol dispenser. ▶ Check that containers are clearly labelled. |
| Storage incompatibility | <ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents ▶ Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|------------------------------|---|--|--|-----------------------------------|--------------------------------|---------------|
| Australia Exposure Standards | acetone | Acetone | 1185 mg/m ³ / 500 ppm | 2375 mg/m ³ / 1000 ppm | Not Available | Not Available |
| Australia Exposure Standards | aluminium powder coated | Aluminium (metal dust) / Aluminium (welding fumes) (as Al) / Aluminium, pyro powders (as Al) | 10 mg/m ³ / 5 mg/m ³ | Not Available | Not Available | Not Available |
| Australia Exposure Standards | propylene glycol monomethyl ether acetate, alpha-isomer | 1-Methoxy-2-propanol acetate | 274 mg/m ³ / 50 ppm | 548 mg/m ³ / 100 ppm | Not Available | Sk |
| Australia Exposure Standards | n-butyl acetate | n-Butyl acetate | 713 mg/m ³ / 150 ppm | 950 mg/m ³ / 200 ppm | Not Available | Not Available |
| Australia Exposure Standards | xylene | Xylene (o-, m-, p- isomers) | 350 mg/m ³ / 80 ppm | 655 mg/m ³ / 150 ppm | Not Available | Not Available |
| Australia Exposure Standards | naphtha, petroleum, hydrodesulfurised heavy | White spirits | 790 mg/m ³ | Not Available | Not Available | Not Available |
| Australia Exposure Standards | n-butanol | n-Butyl alcohol | Not Available | Not Available | 152 mg/m ³ / 50 ppm | Sk |
| Australia Exposure Standards | isobutanol | Isobutyl alcohol | 152 mg/m ³ / 50 ppm | Not Available | Not Available | Not Available |
| Australia Exposure Standards | methanol | Methyl alcohol | 262 mg/m ³ / 200 ppm | 328 mg/m ³ / 250 ppm | Not Available | Sk |
| Australia Exposure Standards | dimethyl ether | Dimethyl ether | 760 mg/m ³ / 400 ppm | 950 mg/m ³ / 500 ppm | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|--|-------------------------|-------------------------|--------------------------|
| acetone | Acetone | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Propylene glycol monomethyl ether acetate, alpha-isomer; (1-Methoxypropyl-2-acetate) | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Propylene glycol monomethyl ether acetate, beta-isomer; (2-Methoxypropyl-1-acetate) | Not Available | Not Available | Not Available |
| n-butyl acetate | Butyl acetate, n- | Not Available | Not Available | Not Available |
| xylene | Xylenes | Not Available | Not Available | Not Available |
| naphtha, petroleum, hydrodesulfurised heavy | Naphtha, hydrotreated heavy; (Isopar L-rev 2) | 350 mg/m ³ | 1,800 mg/m ³ | 40,000 mg/m ³ |
| naphtha, petroleum, hydrodesulfurised heavy | Petroleum distillates; petroleum ether; includes clay-treated light naphthenic [64742-45-6]; low boiling [68477-31-6]; petroleum extracts [64742-06-9]; petroleum base oil [64742-46-7]; petroleum 50 thinner, petroleum spirits [64475-85-0], Soltrol, VM&P naphtha [8032-32-4]; Ligroine, and paint solvent; petroleum paraffins C5-C20 [64771-72-8]; hydrotreated light naphthenic [64742-53-6]; solvent refined light naphthenic [64741-97-5]; and machine coolant 1 | 1,100 mg/m ³ | 1,800 mg/m ³ | 40,000 mg/m ³ |
| naphtha, petroleum, hydrodesulfurised heavy | Naphtha (coal tar); includes solvent naphtha, petroleum (64742-88-7), naphtha (petroleum) light aliphatic, rubber solvent (64742-89-8), heavy catalytic cracked (64741-54-4), light straight run (64741-46-4), heavy aliphatic solvent (64742-96-7), high flash aromatic and aromatic solvent naphtha (64742-95-6) | 1,200 mg/m ³ | 6,700 mg/m ³ | 40,000 mg/m ³ |
| naphtha, petroleum, hydrodesulfurised heavy | Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene) | 300 mg/m ³ | 1,800 mg/m ³ | 29500 mg/m ³ |
| n-butanol | Butyl alcohol, n-; (n-Butanol) | 60 ppm | 800 ppm | 8000 ppm |
| isobutanol | Isobutyl alcohol | 150 ppm | 1,300 ppm | 8000 ppm |
| methanol | Methyl alcohol; (Methanol) | Not Available | Not Available | Not Available |

| | | | | |
|----------------|--------------------------------|-----------|----------|----------|
| dimethyl ether | Methyl ether; (Dimethyl ether) | 3,000 ppm | 3800 ppm | 7200 ppm |
|----------------|--------------------------------|-----------|----------|----------|

| Ingredient | Original IDLH | Revised IDLH |
|---|--|--|
| acetone | 20,000 ppm | 2,500 [LEL] ppm |
| aluminium powder coated | Not Available | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Not Available | Not Available |
| n-butyl acetate | 10,000 ppm | 1,700 [LEL] ppm |
| xylene | 1,000 ppm | 900 ppm |
| naphtha, petroleum, hydrodesulfurised heavy | 29,500 mg/m ³ / 10,000 ppm / 10,000 [LEL] ppm | 20,000 mg/m ³ / 1,100 [LEL] ppm / 1,000 [LEL] ppm |
| n-butanol | 8,000 ppm | 1,400 [LEL] ppm |
| isobutanol | 8,000 ppm | 1,600 ppm |
| methanol | 25,000 ppm | 6,000 ppm |
| dimethyl ether | Not Available | Not Available |

MATERIAL DATA

NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5). This note applies only to certain complex oil-derived substances in Annex IV.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7). Note E shall also apply when the substance is classified as a carcinogen. This note applies only to certain complex oil-derived substances in Annex VI.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure controls

| | |
|---|--|
| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Neoprene gloves ▶ No special equipment needed when handling small quantities. ▶ OTHERWISE: ▶ For potentially moderate exposures: ▶ Wear general protective gloves, eg. light weight rubber gloves. ▶ For potentially heavy exposures: ▶ Wear chemical protective gloves, eg. PVC. and safety footwear. |
| Body protection | See Other protection below |
| Other protection | <p>No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ Overalls. ▶ Skin cleansing cream. ▶ Eyewash unit. ▶ The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton. ▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost. <p>BREThERICK: Handbook of Reactive Chemical Hazards.</p> |
| 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 |
|-----------|---------|
| ##n-butyl | acetate |
| BUTYL | C |

Respiratory protection

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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 10 x ES | AX-AUS / Class 1 | - | AX-PAPR-AUS / Class 1 |

| | |
|-------------------|-------|
| BUTYL/NEOPRENE | C |
| CPE | C |
| HYPALON | C |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| PVDC/PE/PVDC | C |
| SARANEX-23 | C |
| SARANEX-23 2-PLY | C |
| TEFLON | C |
| VITON | C |
| VITON/BUTYL | C |
| VITON/NEOPRENE | C |
| ##dimethyl | ether |

| | | | |
|----------------|-----------|------------|---|
| up to 50 x ES | Air-line* | - | - |
| up to 100 x ES | - | AX-3 | - |
| 100+ x ES | - | Air-line** | - |

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

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

* 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|---|--|------------------|
| Appearance | Grey highly flammable liquid aerosol with a characteristic odour; insoluble in water. | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.062 @ 20 deg.C |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | >200 |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | <0 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | HIGHLY FLAMMABLE. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Immiscible | pH as a solution (1%) | Not Applicable |
| Vapour density (Air = 1) | Not Available | VOC g/L | 492 |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---------------------------|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ Elevated temperatures. ▶ Presence of open flame. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |

| | |
|---|---------------|
| 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 | <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. Ethers produce narcosis following inhalation.</p> <p>Inhalation of lower alkyl ethers may result in central nervous system depression or stimulation, intoxication, headache, dizziness, weakness, blurred vision, seizures and possible coma. Cardiovascular involvement may produce hypotension, bradycardia and cardiovascular collapse, whilst respiratory symptoms might include irritation of nose and throat, cough, laryngeal spasm, pharyngitis, irregular respiration, depression, pulmonary oedema and respiratory arrest. Nausea, vomiting and salivation might also indicate overexposure.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p> <p>The primary physiological effect which follows exposure to diethyl ether is acute narcosis. Inhalation at about 7.5%, in air, produces mild intoxication in about 12 minutes. Longer exposures and exposure to higher concentrations produces incoordination, blurring of vision, headache, dizziness and unconsciousness (20% produces unconsciousness in about 20 minutes). Heavy exposures may be lethal and deaths occur due to depression of the respiratory system.</p> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p> |
| Skin Contact | <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>Limited 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. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>Spray mist may produce discomfort</p> <p>Alkyl ethers may defat and dehydrate the skin producing dermatoses. Absorption may produce headache, dizziness, and central nervous system depression.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.</p> |
| Eye | <p>Evidence exists, or practical experience predicts, that the material may cause 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.</p> <p>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p> <p>Direct contact with the eye may not cause irritation because of the extreme volatility of the gas; however concentrated atmospheres may produce irritation after brief exposures..</p> <p>Eye contact with alkyl ethers (vapours or liquid) may produce irritation, redness and lachrymation.</p> |
| Chronic | <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. 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.</p> <p>Principal route of occupational exposure to the gas is by inhalation.</p> <p>Chronic exposure to alkyl ethers may result in loss of appetite, excessive thirst, fatigue, and weight loss</p> <p>Repeated application of mildly hydrotreated oils (principally paraffinic), to mouse skin, induced skin tumours; no tumours were induced with severely hydrotreated oils.</p> <p>Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).</p> |

| | | |
|-------------------------|--|-----------------------------------|
| Alu HT #823-2618 | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| acetone | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 20000 mg/kg ^[2] | Eye (human): 500 ppm - irritant |
| | Inhalation (rat) LC50: 50.1 mg/L/8 hr ^[2] | Eye (rabbit): 20mg/24hr -moderate |
| | Oral (rat) LD50: 5800 mg/kg ^[2] | Eye (rabbit): 3.95 mg - SEVERE |
| | | Skin (rabbit): 500 mg/24hr - mild |

| | | |
|---|---|------------------------------------|
| | | Skin (rabbit):395mg (open) - mild |
| aluminium powder coated | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] | Not Available |
| | Inhalation (rat) LC50: 4345 ppm/6hr ^[2] | |
| | Oral (rat) LD50: >14.1 ml ^[1] | |
| n-butyl acetate | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >14080 mg/kg ^[1] | Eye (human): 300 mg |
| | Inhalation (rat) LC50: 2000 ppm/4hr ^[2] | Eye (rabbit): 20 mg (open)-SEVERE |
| | Inhalation (rat) LC50: 390 ppm/4hr ^[2] | Eye (rabbit): 20 mg/24h - moderate |
| | Oral (rat) LD50: 10736 mg/kg ^[1] | Skin (rabbit): 500 mg/24h-moderate |
| xylene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >1700 mg/kg ^[2] | Eye (human): 200 ppm irritant |
| | Inhalation (rat) LC50: 5000 ppm/4hr ^[2] | Eye (rabbit): 5 mg/24h SEVERE |
| | Oral (rat) LD50: 4300 mg/kg ^[2] | Eye (rabbit): 87 mg mild |
| | | Skin (rabbit):500 mg/24h moderate |
| naphtha, petroleum, hydrodesulfurised heavy | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >1900 mg/kg ^[1] | Not Available |
| | Dermal (rabbit) LD50: >1900 mg/kg ^[1] | |
| | Dermal (rabbit) LD50: >1900 mg/kg ^[1] | |
| | Dermal (rabbit) LD50: >1900 mg/kg ^[1] | |
| | Dermal (rabbit) LD50: >3000 mg/kg ^[2] | |
| | dermal (rat) LD50: 28000 mg/kg ^[2] | |
| | Inhalation (rat) LC50: >1400 ppm/8hr ^[2] | |
| | Inhalation (rat) LC50: 3400 ppm/4hr ^[2] | |
| | Inhalation (rat) LC50: 61 mg/L/4hr ^[2] | |
| | Oral (rat) LD50: >19650 mg/kg ^[2] | |
| | Oral (rat) LD50: >4300 mg/kg ^[2] | |
| | Oral (rat) LD50: >4500 mg/kg ^[1] | |
| | Oral (rat) LD50: >4500 mg/kg ^[1] | |
| Oral (rat) LD50: >4500 mg/kg ^[1] | | |
| Oral (rat) LD50: >4500 mg/kg ^[1] | | |
| Oral (rat) LD50: >5000 mg/kg ^[2] | | |
| n-butanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 3434.4 mg/kg ^[1] | Eye (human): 50 ppm - irritant |
| | Inhalation (rat) LC50: 24 mg/L/4hr ^[2] | Eye (rabbit): 1.6 mg-SEVERE |
| | Inhalation (rat) LC50: 8000 ppm/4hr ^[2] | Eye (rabbit): 24 mg/24h-SEVERE |
| | Oral (rat) LD50: 2292.3 mg/kg ^[1] | Skin (rabbit): 405 mg/24h-moderate |
| isobutanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >2000 mg/kg ^[1] | Eye (rabbit): 2 20 mg/24h-moderate |
| | Inhalation (rat) LC50: 19.2 mg/L/4hr ^[2] | Eye (rabbit): 2 mg/24h - SEVERE |
| | Oral (rat) LD50: 2460 mg/kg ^[2] | Skin (rabbit): mg (open)-SEVERE |
| methanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 15800 mg/kg ^[2] | Eye (rabbit): 100 mg/24h-moderate |
| | Inhalation (rat) LC50: 64000 ppm/4hr ^[2] | Eye (rabbit): 40 mg-moderate |
| | Oral (rat) LD50: >1187-2769 mg/kg ^[1] | Skin (rabbit): 20 mg/24 h-moderate |

| | | |
|----------------|--|-------------------|
| dimethyl ether | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: 309 mg/L/4hr ^[2] | Not Available |

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

| | |
|---|---|
| ACETONE | <p>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 epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.</p> <p>for acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin. Acetone is an eye irritant. The subchronic toxicity of acetone has been examined in mice and rats that were administered acetone in the drinking water and again in rats treated by oral gavage.</p> |
| PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER | <p>for propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on reproductive organs, the developing embryo and fetus, blood (haemolytic effects), or thymus, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces an alkoxyacetic acid. A BASF report (in ECETOC) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects. The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer. Hazard appears low but emphasizes the need for care in handling this chemical. [I.C.]</p> <p>A BASF report (in ECETOC) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects. The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer. Hazard appears low but emphasizes the need for care in handling this chemical. [I.C.] *Shin-Etsu SDS</p> |
| XYLENE | <p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Reproductive effector in rats</p> |
| N-BUTANOL | <p>for n-butanol Acute toxicity: n-Butanol (BA) was only slightly toxic to experimental animals following acute oral, dermal, or inhalation exposure. The acute oral LD50 values for female rats ranged from 790 to 4360 mg/kg. Different strains of rat were used in each of four studies, which may account for the variability. Oral LD50 values for mice, rabbits, hamsters, dogs, and male rats all fell within the same range.</p> |
| ALUMINIUM POWDER COATED & NAPHTHA, PETROLEUM, HYDRODESULFURISED HEAVY | No significant acute toxicological data identified in literature search. |
| N-BUTYL ACETATE & XYLENE & N-BUTANOL & ISOBUTANOL | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| N-BUTYL ACETATE & XYLENE & N-BUTANOL & ISOBUTANOL & METHANOL | 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. |
| N-BUTANOL & ISOBUTANOL | Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. |

| | | | |
|--|---|---------------------------------|---|
| 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 available but does not fill the criteria for classification
 ✓ – Data required to make classification available
 ☐ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|------------|----------|--------------------|-------------------------------|------------|--------|
| acetone | LC50 | 96 | Fish | >100mg/L | 4 |
| acetone | EC50 | 48 | Crustacea | >100mg/L | 4 |
| acetone | EC50 | 96 | Algae or other aquatic plants | 20.565mg/L | 4 |
| acetone | EC50 | 384 | Crustacea | 97.013mg/L | 3 |

Continued...

| | | | | | |
|---|------|-----|-------------------------------|-----------------|---|
| acetone | NOEC | 96 | Algae or other aquatic plants | 4.950mg/L | 4 |
| aluminium powder coated | LC50 | 96 | Fish | 0.078-0.108mg/L | 2 |
| aluminium powder coated | EC50 | 48 | Crustacea | 0.7364mg/L | 2 |
| aluminium powder coated | EC50 | 96 | Algae or other aquatic plants | 0.0054mg/L | 2 |
| aluminium powder coated | BCF | 360 | Algae or other aquatic plants | 9mg/L | 4 |
| aluminium powder coated | EC50 | 120 | Fish | 0.000051mg/L | 5 |
| aluminium powder coated | NOEC | 72 | Algae or other aquatic plants | >=0.004mg/L | 2 |
| propylene glycol monomethyl ether acetate, alpha-isomer | LC50 | 96 | Fish | 100mg/L | 1 |
| propylene glycol monomethyl ether acetate, alpha-isomer | EC50 | 48 | Crustacea | =408mg/L | 1 |
| propylene glycol monomethyl ether acetate, alpha-isomer | EC50 | 96 | Algae or other aquatic plants | 9.337mg/L | 3 |
| propylene glycol monomethyl ether acetate, alpha-isomer | EC0 | 24 | Crustacea | =500mg/L | 1 |
| propylene glycol monomethyl ether acetate, alpha-isomer | NOEC | 336 | Fish | 47.5mg/L | 2 |
| n-butyl acetate | LC50 | 96 | Fish | 18mg/L | 2 |
| n-butyl acetate | EC50 | 48 | Crustacea | =32mg/L | 1 |
| n-butyl acetate | EC50 | 96 | Algae or other aquatic plants | 1.675mg/L | 3 |
| n-butyl acetate | EC50 | 96 | Fish | 18mg/L | 2 |
| xylene | LC50 | 96 | Fish | 2.6mg/L | 2 |
| xylene | EC50 | 48 | Crustacea | >3.4mg/L | 2 |
| xylene | EC50 | 72 | Algae or other aquatic plants | 4.6mg/L | 2 |
| xylene | EC50 | 24 | Crustacea | 0.711mg/L | 4 |
| xylene | NOEC | 73 | Algae or other aquatic plants | 0.44mg/L | 2 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =13mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =30000mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | NOEC | 72 | Algae or other aquatic plants | =0.1mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 48 | Crustacea | >100mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 96 | Algae or other aquatic plants | =450mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =6.5mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =6.5mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | NOEC | 72 | Algae or other aquatic plants | <0.1mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | LC50 | 96 | Fish | 0.00746mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 48 | Crustacea | 0.058mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | BCF | 96 | Fish | 0.2mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | EC20 | 168 | Crustacea | 0.11mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | NOEC | 168 | Crustacea | <=0.05mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | LC50 | 96 | Fish | 8.8mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 48 | Crustacea | 3.7mg/L | 4 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =6.5mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =4700mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | NOEC | 72 | Algae or other aquatic plants | <0.1mg/L | 1 |

| | | | | | |
|---|------|-----|-------------------------------|---------------|---|
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =6.5mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | EC50 | 72 | Algae or other aquatic plants | =6.5mg/L | 1 |
| naphtha, petroleum, hydrodesulfurised heavy | NOEC | 72 | Algae or other aquatic plants | <0.1mg/L | 1 |
| n-butanol | LC50 | 96 | Fish | 88.462mg/L | 3 |
| n-butanol | EC50 | 48 | Crustacea | >500mg/L | 1 |
| n-butanol | EC50 | 96 | Algae or other aquatic plants | 225mg/L | 2 |
| n-butanol | BCF | 24 | Fish | 921mg/L | 4 |
| n-butanol | EC50 | 384 | Crustacea | 20.661mg/L | 3 |
| n-butanol | NOEC | 48 | Crustacea | 415mg/L | 2 |
| isobutanol | LC50 | 96 | Fish | 99.508mg/L | 3 |
| isobutanol | EC50 | 48 | Crustacea | ca.600mg/L | 1 |
| isobutanol | EC50 | 96 | Algae or other aquatic plants | 451.344mg/L | 3 |
| isobutanol | EC50 | 384 | Crustacea | 23.204mg/L | 3 |
| isobutanol | NOEC | 504 | Crustacea | 4mg/L | 4 |
| methanol | LC50 | 96 | Fish | >100mg/L | 4 |
| methanol | EC50 | 48 | Crustacea | >10000mg/L | 4 |
| methanol | BCF | 24 | Algae or other aquatic plants | 0.05mg/L | 4 |
| methanol | EC50 | 24 | Algae or other aquatic plants | 0.0246708mg/L | 4 |
| methanol | NOEC | 72 | Crustacea | 0.1mg/L | 4 |
| dimethyl ether | LC50 | 96 | Fish | 200.592mg/L | 3 |
| dimethyl ether | EC50 | 48 | Crustacea | >4400.0mg/L | 2 |
| dimethyl ether | EC50 | 96 | Algae or other aquatic plants | 1168.058mg/L | 3 |
| dimethyl ether | EC50 | 384 | Crustacea | 46.027mg/L | 3 |
| dimethyl ether | NOEC | 48 | Crustacea | >4000mg/L | 1 |

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Most ethers are very resistant to hydrolysis, and the rate of cleavage of the carbon-oxygen bond by abiotic processes is expected to be insignificant.

Direct photolysis will not be an important removal process since aliphatic ethers do not absorb light at wavelengths >290 nm

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|------------------------------|----------------------------------|
| acetone | LOW (Half-life = 14 days) | MEDIUM (Half-life = 116.25 days) |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW | LOW |
| n-butyl acetate | LOW | LOW |
| xylene | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |
| n-butanol | LOW (Half-life = 54 days) | LOW (Half-life = 3.65 days) |
| isobutanol | LOW (Half-life = 14.42 days) | LOW (Half-life = 4.15 days) |
| methanol | LOW | LOW |
| dimethyl ether | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---------------------|
| acetone | LOW (BCF = 0.69) |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW (LogKOW = 0.56) |
| n-butyl acetate | LOW (BCF = 14) |
| xylene | MEDIUM (BCF = 740) |
| n-butanol | LOW (BCF = 0.64) |
| isobutanol | LOW (LogKOW = 0.76) |
| methanol | LOW (BCF = 10) |
| dimethyl ether | LOW (LogKOW = 0.1) |

Mobility in soil

| Ingredient | Mobility |
|---|----------------------|
| acetone | HIGH (KOC = 1.981) |
| propylene glycol monomethyl ether acetate, alpha-isomer | HIGH (KOC = 1.838) |
| n-butyl acetate | LOW (KOC = 20.86) |
| n-butanol | MEDIUM (KOC = 2.443) |
| isobutanol | MEDIUM (KOC = 2.048) |
| methanol | HIGH (KOC = 1) |
| dimethyl ether | HIGH (KOC = 1.292) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------------|---|
| Product / Packaging disposal | <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Consult State Land Waste Management Authority for disposal. ▶ Discharge contents of damaged aerosol cans at an approved site. ▶ Allow small quantities to evaporate. ▶ DO NOT incinerate or puncture aerosol cans. |
|-------------------------------------|---|

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|---|----------------|
|  | |
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

Land transport (ADG)

| | | | | | |
|-------------------------------------|---|--------------------|--------------------|------------------|----------------|
| UN number | 1950 | | | | |
| UN proper shipping name | AEROSOLS | | | | |
| Transport hazard class(es) | <table border="0"> <tr> <td>Class</td> <td>2.1</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table> | Class | 2.1 | Subrisk | Not Applicable |
| Class | 2.1 | | | | |
| Subrisk | Not Applicable | | | | |
| Packing group | Not Applicable | | | | |
| Environmental hazard | Not Applicable | | | | |
| Special precautions for user | <table border="0"> <tr> <td>Special provisions</td> <td>63 190 277 327 344</td> </tr> <tr> <td>Limited quantity</td> <td>1000ml</td> </tr> </table> | Special provisions | 63 190 277 327 344 | Limited quantity | 1000ml |
| Special provisions | 63 190 277 327 344 | | | | |
| Limited quantity | 1000ml | | | | |

Air transport (ICAO-IATA / DGR)

| | | | | | | | | | |
|--|--|--------------------|------------------------------|---------------------------------|----------------|-------------------------------|--------|--|----------------|
| UN number | 1950 | | | | | | | | |
| UN proper shipping name | Aerosols, flammable; Aerosols, flammable (engine starting fluid) | | | | | | | | |
| Transport hazard class(es) | <table border="0"> <tr> <td>ICAO/IATA Class</td> <td>2.1</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>10L</td> </tr> </table> | ICAO/IATA Class | 2.1 | ICAO / IATA Subrisk | Not Applicable | ERG Code | 10L | | |
| ICAO/IATA Class | 2.1 | | | | | | | | |
| ICAO / IATA Subrisk | Not Applicable | | | | | | | | |
| ERG Code | 10L | | | | | | | | |
| Packing group | Not Applicable | | | | | | | | |
| Environmental hazard | Not Applicable | | | | | | | | |
| Special precautions for user | <table border="0"> <tr> <td>Special provisions</td> <td>A145A167A802; A1A145A167A802</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>203</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>150 kg</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>203; Forbidden</td> </tr> </table> | Special provisions | A145A167A802; A1A145A167A802 | Cargo Only Packing Instructions | 203 | Cargo Only Maximum Qty / Pack | 150 kg | Passenger and Cargo Packing Instructions | 203; Forbidden |
| Special provisions | A145A167A802; A1A145A167A802 | | | | | | | | |
| Cargo Only Packing Instructions | 203 | | | | | | | | |
| Cargo Only Maximum Qty / Pack | 150 kg | | | | | | | | |
| Passenger and Cargo Packing Instructions | 203; Forbidden | | | | | | | | |

| | |
|---|--------------------|
| Passenger and Cargo Maximum Qty / Pack | 75 kg; Forbidden |
| Passenger and Cargo Limited Quantity Packing Instructions | Y203; Forbidden |
| Passenger and Cargo Limited Maximum Qty / Pack | 30 kg G; Forbidden |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|--------------------|------------------------|
| UN number | 1950 | |
| UN proper shipping name | AEROSOLS | |
| Transport hazard class(es) | IMDG Class | 2.1 |
| | IMDG Subrisk | Not Applicable |
| Packing group | Not Applicable | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | EMS Number | F-D, S-U |
| | Special provisions | 63 190 277 327 344 959 |
| | Limited Quantities | 1000ml |

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

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****ACETONE(67-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

ALUMINIUM POWDER COATED(7429-90-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER(108-65-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

N-BUTYL ACETATE(123-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |

NAPHTHA, PETROLEUM, HYDRODESULFURISED HEAVY(64742-82-1.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
| Australia Hazardous Substances Information System - Consolidated Lists | International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List |
| Australia Inventory of Chemical Substances (AICS) | Passenger and Cargo Aircraft |

N-BUTANOL(71-36-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

ISOBUTANOL(78-83-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

DIMETHYL ETHER(115-10-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft |

| National Inventory | Status |
|--------------------|--|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (propylene glycol monomethyl ether acetate, alpha-isomer; n-butanol; acetone; aluminium powder coated; methanol; xylene; n-butyl acetate; dimethyl ether; naphtha, petroleum, hydrodesulfurised heavy; isobutanol) |

| | |
|-------------------------------|--|
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | N (aluminium powder coated) |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

| Name | CAS No |
|---|---|
| propylene glycol monomethyl ether acetate, alpha-isomer | 108-65-6, 84540-57-8, 142300-82-1 |
| naphtha, petroleum, hydrodesulfurised heavy | 64742-82-1., 64741-92-0., 8052-41-3., 1030262-12-4., 8032-32-4., 8030-30-6., 64742-88-7., 64742-89-8., 8002-05-9., 61789-95-5., 64742-48-9., 101795-02-2., 8031-06-9., 8030-31-7., 50813-73-5., 54847-97-1., 121448-83-7., 8031-38-7., 8031-39-8. |
| dimethyl ether | 115-10-6, 157621-61-9 |

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

The 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.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average
 PC – STEL: Permissible Concentration-Short Term Exposure Limit
 IARC: International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit,
 IDLH: Immediately Dangerous to Life or Health Concentrations
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection
 OTV: Odour Threshold Value
 BCF: BioConcentration Factors
 BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.