

# Wattyl Colourthane Thinner Standard

Valspar (a part of Sherwin-Williams)

Chemwatch Hazard Alert Code: 2

Chemwatch: 6100-99

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Safety Data Sheet according to WHS and ADG requirements

S.GHS.AUS.EN

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

### Product Identifier

|                               |  |
|-------------------------------|--|
| Product name                  | Wattyl Colourthane Thinner Standard  |
| Synonyms                      | Not Available  |
| 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) |
| Other means of identification | Not Available  |

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

|                          |   |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions.<br>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation. |
|--------------------------|---|

### Details of the supplier of the safety data sheet

|                         |  |
|-------------------------|--|
| Registered company name | Valspar (a part of Sherwin-Williams)                       |
| Address                 | Level 4, 2 Burbank Place Baulkham Hills NSW 2153 Australia |
| Telephone               | +61 2 8867 3333  |
| Fax                     | +61 2 8867 3344  |
| Website                 | Not Available  |
| Email                   | Not Available  |

### Emergency telephone number

|                                   |                  |
|-----------------------------------|------------------|
| Association / Organisation        | Not Available    |
| Emergency telephone numbers       | +61 1800 039 008 |
| Other emergency telephone numbers | Not Available    |

## 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 | 2   | 3   |
| Toxicity     | 2   | 3   |
| Body Contact | 2   | 3   |
| Reactivity   | 1   | 2   |
| Chronic      | 0   | 0   |

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

|                               |   |
|-------------------------------|---|
| Poisons Schedule              | S5  |
| Classification <sup>[1]</sup> | Flammable Liquid Category 3, Acute Toxicity (Dermal) Category 4, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Aspiration Hazard Category 1, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3 |

Continued...

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**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

**Label elements**

|                            |   |
|----------------------------|---|
| <b>Hazard pictogram(s)</b> |  |
| <b>SIGNAL WORD</b>         | <b>DANGER</b>   |

**Hazard statement(s)**

|               |  |
|---------------|--|
| <b>H226</b>   | Flammable liquid and vapour.                           |
| <b>H312</b>   | Harmful in contact with skin.                          |
| <b>H319</b>   | Causes serious eye irritation.                         |
| <b>H336</b>   | May cause drowsiness or dizziness.                     |
| <b>H304</b>   | May be fatal if swallowed and enters airways.          |
| <b>H412</b>   | Harmful to aquatic life with long lasting effects.     |
| <b>AUH066</b> | Repeated exposure may cause skin dryness and cracking. |

**Precautionary statement(s) Prevention**

|             |   |
|-------------|---|
| <b>P210</b> | Keep away from heat/sparks/open flames/hot surfaces. - No smoking.                |
| <b>P271</b> | Use only outdoors or in a well-ventilated area.                                   |
| <b>P240</b> | Ground/bond container and receiving equipment.                                    |
| <b>P241</b> | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |
| <b>P242</b> | Use only non-sparking tools.  |
| <b>P243</b> | Take precautionary measures against static discharge.                             |
| <b>P261</b> | Avoid breathing mist/vapours/spray.   |

**Precautionary statement(s) Response**

|                       |  |
|-----------------------|--|
| <b>P301+P310</b>      | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  |
| <b>P331</b>           | Do NOT induce vomiting.  |
| <b>P363</b>           | Wash contaminated clothing before reuse.   |
| <b>P370+P378</b>      | In case of fire: Use alcohol resistant foam or normal protein foam for extinction.   |
| <b>P305+P351+P338</b> | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| <b>P312</b>           | Call a POISON CENTER or doctor/physician if you feel unwell.   |
| <b>P337+P313</b>      | If eye irritation persists: Get medical advice/attention.  |

**Precautionary statement(s) Storage**

|                  |  |
|------------------|--|
| <b>P403+P235</b> | Store in a well-ventilated place. Keep cool. |
| <b>P405</b>      | Store locked up.                             |

**Precautionary statement(s) Disposal**

|             |   |
|-------------|---|
| <b>P501</b> | 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   |
|----------|-----------|--|
| 123-86-4 | 30-60     | <u>n-butyl acetate</u>   |
| 108-65-6 | 10-30     | <u>propylene glycol monomethyl ether acetate, alpha-isomer</u> |

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|               |      |   |
|---------------|------|---|
| 107-98-2      | 5-15 | <u>propylene glycol monomethyl ether - mixture of isomers</u> |
| Not Available | 5-15 | <u>aromatic solvent 100</u>                                   |
| 111-76-2      | 1-9  | <u>ethylene glycol monobutyl ether</u>                        |
| 123-42-2      | 1-5  | <u>diacetone alcohol</u>                                      |
|               |      | less than 0.1% benzene content                                |

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>  |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ 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.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>                      |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul> |

## Indication of any immediate medical attention and special treatment needed

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.

Treat symptomatically.

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

Continued...

- ▶ 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*

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

**Do not** use a water jet to fight fire.

### Special hazards arising from the substrate or mixture

|                             |  |
|-----------------------------|--|
| <b>Fire Incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li> </ul> |
|-----------------------------|--|

### Advice for firefighters

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>▶ Avoid spraying water onto liquid pools.</li> </ul>   |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Liquid and vapour are flammable.</li> <li>▶ Moderate fire hazard when exposed to heat or flame.</li> <li>▶ Vapour forms an explosive mixture with air.</li> <li>▶ Moderate explosion hazard when exposed to heat or flame.</li> <li>▶ Vapour may travel a considerable distance to source of ignition.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> <p>Combustion products include:</p> <ul style="list-style-type: none"> <li>, carbon dioxide (CO<sub>2</sub>)</li> <li>, other pyrolysis products typical of burning organic material.</li> </ul> |
| <b>HAZCHEM</b>               | •3Y   |

## 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

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>▶ Wipe up.</li> <li>▶ Collect residues in a flammable waste container.</li> </ul>           |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Increase ventilation.</li> </ul> |

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

|                          |   |
|--------------------------|---|
| <b>Safe handling</b>     | <ul style="list-style-type: none"> <li>▶ Containers, even those that have been emptied, may contain explosive vapours.</li> <li>▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers.</li> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>▶ Electrostatic discharge may be generated during pumping - this may result in fire.</li> <li>▶ Ensure electrical continuity by bonding and grounding (earthing) all equipment.</li> <li>▶ Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<math>\leq 1</math> m/sec until fill pipe submerged to twice its diameter, then <math>\leq 7</math> m/sec).</li> <li>▶ Avoid splash filling.</li> <li>▶ Do NOT use compressed air for filling discharging or handling operations.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of overexposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ Avoid smoking, naked lights or ignition sources.</li> <li>▶ Avoid generation of static electricity.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers in approved flammable liquid storage area.</li> <li>▶ Store away from incompatible materials in a cool, dry, well-ventilated area.</li> <li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ Storage areas should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorised personnel - adequate security must be provided so that unauthorised personnel do not have access.</li> <li>▶ Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances.</li> <li>▶ Use non-sparking ventilation systems, approved explosion proof equipment and intrinsically safe electrical systems.</li> </ul>   |

### Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ Glass container is suitable for laboratory quantities</li> <li>▶ Packing as supplied by manufacturer.</li> <li>▶ Plastic containers may only be used if approved for flammable liquid.</li> <li>▶ Check that containers are clearly labelled and free from leaks.</li> <li>▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>▶ For materials with a viscosity of at least 2680 cSt. (23 deg. C)</li> <li>▶ For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)</li> <li>▶ Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.</li> <li>▶ Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages</li> <li>▶ In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</li> </ul> |
| <b>Storage incompatibility</b> | <p>4b</p> <ul style="list-style-type: none"> <li>▶ Avoid strong acids, bases.</li> </ul>  |

## 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 | n-butyl acetate   | n-Butyl acetate                   | 150 ppm /<br>713 mg/m3 | 950 mg/m3 /<br>200 ppm | Not Available | Not Available |
| Australia Exposure Standards | propylene glycol monomethyl ether acetate, alpha-isomer | 1-Methoxy-2-propanol acetate      | 50 ppm /<br>274 mg/m3  | 548 mg/m3 /<br>100 ppm | Not Available | Not Available |
| Australia Exposure Standards | propylene glycol monomethyl ether - mixture of isomers  | Propylene glycol monomethyl ether | 100 ppm /<br>369 mg/m3 | 553 mg/m3 /<br>150 ppm | Not Available | Not Available |
| Australia Exposure Standards | ethylene glycol monobutyl ether                         | 2-Butoxyethanol                   | 20 ppm /<br>96.9 mg/m3 | 242 mg/m3 /<br>50 ppm  | Not Available | Not Available |

Continued...

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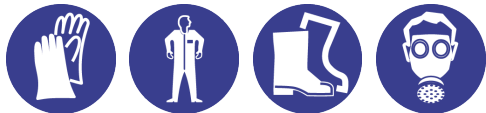
|                              |                   |                   |                    |               |               |               |
|------------------------------|-------------------|-------------------|--------------------|---------------|---------------|---------------|
| Australia Exposure Standards | diacetone alcohol | Diacetone alcohol | 50 ppm / 238 mg/m3 | Not Available | Not Available | Not Available |
|------------------------------|-------------------|-------------------|--------------------|---------------|---------------|---------------|

**EMERGENCY LIMITS**

| Ingredient  | Material name  | TEEL-1        | TEEL-2        | TEEL-3        |
|---|--|---------------|---------------|---------------|
| n-butyl acetate   | Butyl acetate, n-  | 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 |
| propylene glycol monomethyl ether - mixture of isomers  | Propylene glycol monomethyl ether; (Ucar Triol HG-170)                               | 100 ppm       | 160 ppm       | 660 ppm       |
| ethylene glycol monobutyl ether                         | Butoxyethanol, 2-; (Glycol ether EB)   | 60 ppm        | 120 ppm       | 700 ppm       |
| diacetone alcohol                                       | Hydroxy-4-methyl-2-pentanone, 4-; (Diacetone alcohol)                                | 150 ppm       | 350 ppm       | 2100 ppm      |

| Ingredient  | Original IDLH   | Revised IDLH  |
|---|-----------------|---------------|
| n-butyl acetate   | 1,700 [LEL] ppm | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Not Available   | Not Available |
| propylene glycol monomethyl ether - mixture of isomers  | Not Available   | Not Available |
| aromatic solvent 100                                    | Not Available   | Not Available |
| ethylene glycol monobutyl ether                         | 700 ppm         | Not Available |
| diacetone alcohol                                       | 1,800 [LEL] ppm | Not Available |

**Exposure controls**

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | <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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> |
| <b>Personal protection</b>              |    |
| <b>Eye and face protection</b>          | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.</li> </ul>  |
| <b>Skin protection</b>                  | See Hand protection below   |
| <b>Hands/feet protection</b>            | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has</p>   |

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|                         |   |
|-------------------------|---|
|                         | to be observed when making a final choice.<br>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.   |
| <b>Body protection</b>  | See Other protection below  |
| <b>Other protection</b> | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> </ul> <p>Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</p> <p>For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.</p> |

## 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 |
|-------------------|-----|
| BUTYL             | C   |
| BUTYL/NEOPRENE    | 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   |
| TEFLON            | C   |
| VITON             | C   |
| VITON/BUTYL       | 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.

## Respiratory protection

Type A 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                      | A-AUS P3             | -                    | A-PAPR-AUS / Class 1 P3 |
| up to 50 x ES                      | -                    | A-AUS / Class 1 P3   | -                       |
| up to 100 x ES                     | -                    | A-2 P3               | A-PAPR-2 P3 ^           |

^ - 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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), 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

|   |   |  |                |
|---|---|--|----------------|
| <b>Appearance</b>                                   | Clear highly flammable liquid with a strong solvent odour; not miscible with water. |  |                |
| <b>Physical state</b>                               | Liquid  | <b>Relative density (Water = 1)</b>            | 0.90-0.94      |
| <b>Odour</b>  | Not Available   | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available   | <b>Auto-ignition temperature (°C)</b>          | 250            |
| <b>pH (as supplied)</b>                             | Not Applicable  | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available   | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | 128-192   | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | 23  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Flammable.  | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | 36.5  | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | 1.0   | <b>Volatile Component (%vol)</b>               | 100            |
| <b>Vapour pressure (kPa)</b>                        | >1  | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Immiscible  | <b>pH as a solution (1%)</b>                   | Not Applicable |
| <b>Vapour density (Air = 1)</b>                     | >1  | <b>VOC g/L</b>                                 | Not Available  |

### SECTION 10 STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

|                     |   |
|---------------------|---|
| <b>Inhaled</b>      | <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Prolonged exposure may cause headache, nausea and ultimately loss of consciousness.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p>   |
| <b>Ingestion</b>    | <p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p>  |
| <b>Skin Contact</b> | <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>There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Alkyl ethers may defat and dehydrate the skin producing dermatoses. Absorption may produce headache, dizziness, and central nervous system depression.</p> |



## Wattyl Colourthane Thinner Standard

|  |  |                                    |
|--|--|------------------------------------|
| <b>Eye</b>   | There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.  |                                    |
| <b>Chronic</b>   | <p>Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Based on experience with similar materials, there is a possibility that exposure to the material may reduce fertility in humans at levels which do not cause other toxic effects.</p> <p>When taken repeatedly, PGME may cause damage to liver and kidney, drowsiness and even unconsciousness and death. There is no evidence of damage to the sex organs. However, it has led to multiple pregnancies in rats and rabbits, but sperm destruction in dogs. Animal testing also shows high doses can delay bone development.</p> <p>Some glycol esters and their ethers cause wasting of the testicles, reproductive changes, infertility and changes to kidney function. Shorter chain compounds are more dangerous.</p> <p>Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]</p> <p>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.</p> |                                    |
| <b>Wattyl Colourthane Thinner Standard</b>                     | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | Not Available  | Not Available                      |
| <b>n-butyl acetate</b>   | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | Dermal (rabbit) LD50: 3200 mg/kg <sup>[2]</sup>  | Eye ( human): 300 mg               |
|  | Inhalation (rat) LC50: 1.802 mg/l4 h <sup>[1]</sup>  | Eye (rabbit): 20 mg (open)-SEVERE  |
|  | Oral (rat) LD50: 10768 mg/kg <sup>[2]</sup>  | Eye (rabbit): 20 mg/24h - moderate |
|  |  | Skin (rabbit): 500 mg/24h-moderate |
| <b>propylene glycol monomethyl ether acetate, alpha-isomer</b> | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>  | Not Available                      |
|  | Inhalation (rat) LC50: 6510.0635325 mg/l/6h <sup>[2]</sup>   |                                    |
|  | Oral (rat) LD50: >5000 mg/kg <sup>[1]</sup>  |                                    |
| <b>propylene glycol monomethyl ether - mixture of isomers</b>  | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>  | Eye (rabbit) 230 mg mild           |
|  | Inhalation (rat) LC50: 12485.7375 mg/l/5h.d <sup>[2]</sup>   | Eye (rabbit) 500 mg/24 h. - mild   |
|  | Oral (rat) LD50: 3739 mg/kg <sup>[2]</sup>   | Skin (rabbit) 500 mg open - mild   |
| <b>aromatic solvent 100</b>                                    | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | Not Available  | Not Available                      |
| <b>ethylene glycol monobutyl ether</b>                         | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>  | Eye (rabbit): 100 mg SEVERE        |
|  | Inhalation (rat) LC50: 449.48655 mg/l/4H <sup>[2]</sup>  | Eye (rabbit): 100 mg/24h-moderate  |
|  | Oral (rat) LD50: 250 mg/kg <sup>[2]</sup>  | Skin (rabbit): 500 mg, open; mild  |
| <b>diacetone alcohol</b>                                       | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|  | Dermal (rabbit) LD50: 13500 mg/kg <sup>[2]</sup>   | Eye (human): 100 ppm/15 mins.      |
|  | Oral (rat) LD50: 2520 mg/kg <sup>[2]</sup>   | Eye (rabbit): 5 mg SEVERE          |
|  |  | Skin (rabbit): 500 mg open mild    |
| <b>Legend:</b>   | 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  |                                    |

|  |  |
|--|--|
| <b>Wattyl Colourthane Thinner Standard</b>                     | The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.   |
| <b>PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER</b> | 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.I] *Shin-Etsu SDS |

## Wattyl Colourthane Thinner Standard

|   |   |
|---|---|
| <b>PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS</b>   | NOTE: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Fetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species.  |
| <b>AROMATIC SOLVENT 100</b>   | <p>Absorption of 1,2,4-trimethylbenzene occurs after exposure by swallowing, inhalation, or skin contact. In the workplace, inhalation and skin contact are the most important routes of absorption; whole-body toxic effects from skin absorption are unlikely to occur as the skin irritation caused by the chemical generally leads to quick removal. The substance is fat-soluble and may accumulate in fatty tissues. It is also bound to red blood cells in the bloodstream. It is excreted from the body both by exhalation and in the urine.</p> <p>Acute toxicity: Direct contact with liquid 1,2,4-trimethylbenzene is irritating to the skin, and breathing the vapour is irritating to the airway, causing lung inflammation. Breathing high concentrations of the chemical vapour causes headache, fatigue and drowsiness.</p> <p>For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation.</p> <p>Cancer-causing potential: Animal testing shows inhaling petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans.</p> <p>Mutation-causing potential: Most studies involving gasoline have returned negative results regarding the potential to cause mutations, including all recent studies in living human subjects (such as in petrol service station attendants).</p> <p>Reproductive toxicity: Animal studies show that high concentrations of toluene (&gt;0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus. Other studies show no adverse effects on the foetus.</p> |
| <b>ETHYLENE GLYCOL MONOBUTYL ETHER</b>  | <p>For ethylene glycol monoalkyl ethers and their acetates (EGMAEs):</p> <p>Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates.</p> <p>EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyzes the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.</p> <p><b>Acute Toxicity:</b> Oral LD50 values in rats for all category members range from 739 (EGHE) to 3089 mg/kg bw (EGPE), with values increasing with decreasing molecular weight. Four to six hour acute inhalation toxicity studies were conducted for these chemicals in rats at the highest vapour concentrations practically achievable. Values range from LC0 &gt; 85 ppm (508 mg/m<sup>3</sup>) for EGHE, LC50 &gt; 400ppm (2620 mg/m<sup>3</sup>) for EGBEA to LC50 &gt; 2132 ppm (9061 mg/m<sup>3</sup>) for EGPE. No lethality was observed for any of these materials under these conditions.</p> <p>Animal testing showed that exposure to ethylene glycol monobutyl ether resulted in toxicity to both the mother and the embryo. Reproductive effects were thought to be less than that of other monoalkyl ethers of ethylene glycol.</p> <p>Chronic exposure may cause anaemia, with enlargement and fragility of red blood cells. It is thought that in animals butoxyethanol may cause generalized clotting and bone infarction. In animals, 2-butoxyethanol also increased the rate of some cancers, including liver cancer.</p> <p>NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. ** ASCC (NZ) SDS</p>                                      |
| <b>DIACETONE ALCOHOL</b>  | <p>Diacetone alcohol (DAA) is irritating to the skin and eyes, but the oral lethal dose is more than 4000mg/kg. Animal testing showed some effects to the kidney and liver. It has not been shown to cause reproductive or developmental toxicity or genetic damage, but it may reduce fertility.</p> <p>Inhalation (human) TCLo: 400 ppm resp.effect</p>   |
| <b>Wattyl Colourthane Thinner Standard &amp; N-BUTYL ACETATE &amp; ETHYLENE GLYCOL MONOBUTYL ETHER &amp; DIACETONE ALCOHOL</b>      | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.  |
| <b>Wattyl Colourthane Thinner Standard &amp; AROMATIC SOLVENT 100</b>   | Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.   |
| <b>Wattyl Colourthane Thinner Standard &amp; N-BUTYL ACETATE &amp; PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS &amp;</b> | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.  |

## Wattyl Colourthane Thinner Standard

|   |  |
|---|--|
| <b>AROMATIC SOLVENT 100 &amp; ETHYLENE GLYCOL MONOBUTYL ETHER &amp; DIACETONE ALCOHOL</b>   |  |
| <b>Wattyl Colourthane Thinner Standard &amp; ETHYLENE GLYCOL MONOBUTYL ETHER</b>  | Ethylene glycol is quickly and extensively absorbed throughout the gastrointestinal tract. Limited information suggests that it is also absorbed through the airways; absorption through skin is apparently slow. Following absorption, it is distributed throughout the body. In humans, it is initially metabolized by alcohol dehydrogenase to form glycoaldehyde, which is rapidly converted to glycolic acid and glyoxal. These breakdown products are oxidized to glyoxylate, which may be further metabolized to formic acid, oxalic acid, and glycine. Breakdown of both glycine and formic acid can generate carbon dioxide, which is one of the major elimination products of ethylene glycol. In addition to exhaled carbon dioxide, ethylene glycol is eliminated in the urine as both the parent compound and glycolic acid.  |
| <b>Wattyl Colourthane Thinner Standard &amp; PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER &amp; PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS</b> | Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM).<br>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 the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces and alkoxyacetic acid. The reproductive and developmental toxicities of the lower molecular weight homologues in the ethylene series are due specifically to the formation of methoxyacetic and ethoxyacetic acids. Longer chain homologues in the ethylene series are not associated with reproductive toxicity, but can cause haemolysis in sensitive species, also through formation of an alkoxyacetic acid. The predominant alpha isomer of all the PGEs (which is thermodynamically favoured during manufacture of PGEs) is a secondary alcohol incapable of forming an alkoxypropionic acid. |
| <b>Wattyl Colourthane Thinner Standard &amp; PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER</b>  | Animal testing shows that high concentrations (for example, 0.5%) are associated with birth defects but lower exposures have not been shown to cause adverse effects.<br>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.  |
| <b>PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS &amp; DIACETONE ALCOHOL</b>   | No significant acute toxicological data identified in literature search.   |
| <b>PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS &amp; AROMATIC SOLVENT 100</b>  | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.  |

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

**Legend:** ✗ – Data available but does not fill the criteria for classification

✓ – Data available to make classification

⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

| Wattyl Colourthane Thinner Standard | ENDPOINT      | TEST DURATION (HR)            | SPECIES                       | VALUE         | SOURCE        |
|-------------------------------------|---------------|-------------------------------|-------------------------------|---------------|---------------|
|                                     | Not Available | Not Available                 | Not Available                 | Not Available | Not Available |
| n-butyl acetate                     | ENDPOINT      | TEST DURATION (HR)            | SPECIES                       | VALUE         | SOURCE        |
|                                     | LC50          | 96                            | Fish                          | 18mg/L        | 4             |
|                                     | EC50          | 48                            | Crustacea                     | ≈32mg/L       | 1             |
|                                     | EC50          | 72                            | Algae or other aquatic plants | ≈674.7mg/L    | 1             |
| EC0                                 | 192           | Algae or other aquatic plants | ≈21mg/L                       | 1             |               |
| propylene glycol monomethyl ether   | ENDPOINT      | TEST DURATION (HR)            | SPECIES                       | VALUE         | SOURCE        |
|                                     |               |                               |                               |               |               |

Continued...

## Wattyl Colourthane Thinner Standard

|  |   |                    |               |               |               |
|--|---|--------------------|---------------|---------------|---------------|
| acetate, alpha-isomer                                  | LC50  | 96                 | Fish          | =100mg/L      | 1             |
|  | EC50  | 48                 | Crustacea     | =408mg/L      | 1             |
|  | EC0   | 24                 | Crustacea     | =500mg/L      | 1             |
|  | NOEC  | 336                | Fish          | 47.5mg/L      | 2             |
| propylene glycol monomethyl ether - mixture of isomers | ENDPOINT  | TEST DURATION (HR) | SPECIES       | VALUE         | SOURCE        |
|  | LC50  | 96                 | Fish          | =4600mg/L     | 1             |
|  | EC50  | 48                 | Crustacea     | >500mg/L      | 1             |
|  | NOEC  | 96                 | Fish          | =4600mg/L     | 1             |
| aromatic solvent 100                                   | ENDPOINT  | TEST DURATION (HR) | SPECIES       | VALUE         | SOURCE        |
|  | Not Available   | Not Available      | Not Available | Not Available | Not Available |
| ethylene glycol monobutyl ether                        | ENDPOINT  | TEST DURATION (HR) | SPECIES       | VALUE         | SOURCE        |
|  | LC50  | 96                 | Fish          | 1250mg/L      | 4             |
|  | EC50  | 48                 | Crustacea     | >1000mg/L     | 4             |
|  | NOEC  | 96                 | Crustacea     | 1000mg/L      | 4             |
| diacetone alcohol                                      | ENDPOINT  | TEST DURATION (HR) | SPECIES       | VALUE         | SOURCE        |
|  | LC50  | 96                 | Fish          | 420mg/L       | 4             |
| <b>Legend:</b>   | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - 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.

For Propylene Glycol Ethers: log Kow's range from 0.309 for TPM to 1.523 for DPnB. Calculated BCFs range from 1.47 for DPnB to 3.16 for DPMA and TPM, indicating low bioaccumulation. Henry's Law Constants are low for all category members, ranging from 5.7 x 10<sup>-9</sup> atm-m<sup>3</sup>/mole for TPM to 2.7 x 10<sup>-9</sup> atm-m<sup>3</sup>/mole for PnB.

Environmental Fate: Most are liquids at room temperature and all are water-soluble.

Atmospheric Fate: In air, the half-life due to direct reactions with photochemically generated hydroxyl radicals, range from 2.0 hours for TPM to 4.6 hours for PnB.

Aquatic/Terrestrial Fate: Most propylene glycol ethers are likely to partition roughly equally into the soil and water compartments in the environment with small to negligible amounts remaining in other environmental compartments (air, sediment, and aquatic biota). In water, most members of this family are "readily biodegradable" under aerobic conditions.

For Hydrocarbons: log Kow 1. BCF~10.

BCF 20-200. For C5 and greater alkanes: log Kow 3-4.5. BCF 100-1,500.

For Alkanes, Benzene, Toluene, Ethylbenzene, Xylene (BTEX):

Environmental Fate: Microbes found in many natural settings (e.g., soils, groundwater, ponds) have been shown to be capable of degrading organic compounds.

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

Drinking Water Standards: hydrocarbon total: 10 ug/l (UK max.).

Environmental Fate: Several glycol ethers have been shown to biodegrade however; biodegradation slows as molecular weight increases. No glycol ethers that have been tested demonstrate marked resistance to biodegradative processes.

Atmospheric Fate: Upon release to the atmosphere by evaporation, high boiling glycol ethers are estimated to undergo photo-degradation (atmospheric half lives = 2.4-2.5 hr). Aquatic Fate: In water, glycol ethers undergo biodegradation (typically 47-92% after 8-21 days) and have a low potential for bioaccumulation (log Kow ranges from -1.73 to +0.51).

Ecotoxicity: Tri- and tetra ethylene glycol ethers are "practically non-toxic" to aquatic species. No major differences are observed in the order of toxicity going from the methyl- to the butyl ethers.

**DO NOT discharge into sewer or waterways.**

## Persistence and degradability

| Ingredient  | Persistence: Water/Soil | Persistence: Air |
|---|-------------------------|------------------|
| n-butyl acetate   | LOW                     | LOW              |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW                     | LOW              |

Continued...

|  |                           |                             |
|--|---------------------------|-----------------------------|
| propylene glycol monomethyl ether - mixture of isomers | LOW (Half-life = 56 days) | LOW (Half-life = 1.7 days)  |
| ethylene glycol monobutyl ether                        | LOW (Half-life = 56 days) | LOW (Half-life = 1.37 days) |
| diacetone alcohol                                      | HIGH                      | HIGH                        |

### Bioaccumulative potential

| Ingredient  | Bioaccumulation        |
|---|------------------------|
| n-butyl acetate   | LOW (BCF = 14)         |
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW (LogKOW = 0.56)    |
| propylene glycol monomethyl ether - mixture of isomers  | LOW (BCF = 2)          |
| ethylene glycol monobutyl ether                         | LOW (BCF = 2.51)       |
| diacetone alcohol                                       | LOW (LogKOW = -0.3376) |

### Mobility in soil

| Ingredient  | Mobility           |
|---|--------------------|
| n-butyl acetate   | LOW (KOC = 20.86)  |
| propylene glycol monomethyl ether acetate, alpha-isomer | HIGH (KOC = 1.838) |
| propylene glycol monomethyl ether - mixture of isomers  | HIGH (KOC = 1)     |
| ethylene glycol monobutyl ether                         | HIGH (KOC = 1)     |
| diacetone alcohol                                       | HIGH (KOC = 1)     |

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

|  |  |
|--|--|
| <p><b>Product / Packaging disposal</b></p> | <ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <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"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <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. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration</li> </ul> |
|--|--|

- ▶ in a licensed apparatus (after admixture with suitable combustible material).
- ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

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

### Land transport (ADG)

|                              |  |
|------------------------------|--|
| UN number                    | 1263   |
| 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) |
| Transport hazard class(es)   | Class : 3<br>Subrisk : Not Applicable  |
| Packing group                | III  |
| Environmental hazard         | Not Applicable   |
| Special precautions for user | Special provisions : 163 223 367<br>Limited quantity : 5 L   |

### Air transport (ICAO-IATA / DGR)

|                              |  |
|------------------------------|--|
| UN number                    | 1263   |
| 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)  |
| Transport hazard class(es)   | ICAO/IATA Class : 3<br>ICAO / IATA Subrisk : Not Applicable<br>ERG Code : 3L   |
| Packing group                | III  |
| Environmental hazard         | Not Applicable   |
| Special precautions for user | Special provisions : A3 A72 A192<br>Cargo Only Packing Instructions : 366<br>Cargo Only Maximum Qty / Pack : 220 L<br>Passenger and Cargo Packing Instructions : 355<br>Passenger and Cargo Maximum Qty / Pack : 60 L<br>Passenger and Cargo Limited Quantity Packing Instructions : Y344<br>Passenger and Cargo Limited Maximum Qty / Pack : 10 L |

### Sea transport (IMDG-Code / GGVSee)

|                            |  |
|----------------------------|--|
| UN number                  | 1263   |
| 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) |
| Transport hazard class(es) | IMDG Class : 3<br>IMDG Subrisk : Not Applicable  |
| Packing group              | III  |
| Environmental hazard       | Not Applicable   |

## Watty Colourthane Thinner Standard

|                                     |                    |                 |
|-------------------------------------|--------------------|-----------------|
| <b>Special precautions for user</b> | EMS Number         | F-E , S-E       |
|                                     | Special provisions | 163 223 367 955 |
|                                     | Limited Quantities | 5 L             |

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

|  |   |
|--|---|
| Australia Exposure Standards   | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals |   |

**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 Chemical Information System (HCIS) - Hazardous Chemicals |   |

**PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS(107-98-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|  |  |
|--|--|
| Australia Exposure Standards   | Australia Inventory of Chemical Substances (AICS)  |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix B (Part 3) |

**AROMATIC SOLVENT 100(NOT AVAILABLE) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|                |
|----------------|
| Not Applicable |
|----------------|

**ETHYLENE GLYCOL MONOBUTYL ETHER(111-76-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|  |   |
|--|---|
| Australia Exposure Standards   | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)                |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals                         | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I |
| Australia Inventory of Chemical Substances (AICS)  | Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6                         |
| Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2) | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs                       |

**DIACETONE ALCOHOL(123-42-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

|  |   |
|--|---|
| Australia Exposure Standards   | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals |   |

**National Inventory Status**

| National Inventory            | Status   |
|-------------------------------|--|
| Australia - AICS              | N (aromatic solvent 100)   |
| Canada - DSL                  | N (aromatic solvent 100)   |
| Canada - NDSL                 | N (propylene glycol monomethyl ether acetate, alpha-isomer; n-butyl acetate; diacetone alcohol; ethylene glycol monobutyl ether; aromatic solvent 100)                                   |
| China - IECSC                 | N (aromatic solvent 100)   |
| Europe - EINEC / ELINCS / NLP | N (aromatic solvent 100)   |
| Japan - ENCS                  | N (aromatic solvent 100)   |
| Korea - KECI                  | N (aromatic solvent 100)   |
| New Zealand - NZIoC           | N (aromatic solvent 100)   |
| Philippines - PICCS           | N (aromatic solvent 100)   |
| USA - TSCA                    | N (aromatic solvent 100)   |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

Continued...



**SECTION 16 OTHER INFORMATION**

|                      |               |
|----------------------|---------------|
| <b>Revision Date</b> | 13/11/2017    |
| <b>Initial Date</b>  | Not Available |

**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 |
| propylene glycol monomethyl ether - mixture of isomers  | 107-98-2, 1320-67-8., 28677-93-2  |

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.

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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