



## Dunlop Butynol Adhesive (Ardex)

### Ardex (Ardex NZ)

Chemwatch: 70-6762  
Version No: 2.1.1.1  
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 10/11/2016  
Print Date: 11/11/2016  
S.GHS.NZL.EN

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

### Product Identifier

|                               |                                       |
|-------------------------------|---------------------------------------|
| Product name                  | Dunlop Butynol Adhesive (Ardex)       |
| Synonyms                      | Not Available                         |
| Proper shipping name          | ADHESIVES containing flammable liquid |
| Other means of identification | Not Available                         |

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

|                          |                         |
|--------------------------|-------------------------|
| Relevant identified uses | Solvent based adhesive. |
|--------------------------|-------------------------|

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

|                         |  |   |
|-------------------------|--|---|
| Registered company name | Ardex (Ardex NZ)                                 | Ardex (Ardex Australia)                       |
| Address                 | 32 Lane Street Christchurch Woolston New Zealand | 20 Powers Road NSW Seven Hills 2147 Australia |
| Telephone               | +64 3384 3029                                    | 1800 224 070                                  |
| Fax                     | +64 3384 9779                                    | +61 2 9838 7817                               |
| Website                 | Not Available                                    | Not Available                                 |
| Email                   | Not Available                                    | Not Available                                 |

### Emergency telephone number

|                                   |                                    |               |
|-----------------------------------|------------------------------------|---------------|
| Association / Organisation        | Not Available                      | Not Available |
| Emergency telephone numbers       | 1800 222 841 (General information) | 1800 222 841  |
| Other emergency telephone numbers | Not Available                      | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

|   |  |
|---|--|
| Classification <sup>[1]</sup>                   | Flammable Liquid Category 2, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 5, Acute Toxicity (Inhalation) Category 5, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Reproductive Toxicity Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Specific target organ toxicity - repeated exposure Category 2, Aspiration Hazard Category 1, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2 |
| Legend:   | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI   |
| Determined by Chemwatch using GHS/HSNO criteria | 3.1B, 6.1D (oral), 6.1E (aspiration), 6.1E (dermal), 6.1E (inhalation), 6.3A, 6.4A, 6.8B, 6.9 (narcotic), 6.9B (inhalation), 9.1B, 9.1D  |

### Label elements

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

SIGNAL WORD **DANGER**

### Hazard statement(s)

|      |                                     |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H302 | Harmful if swallowed.               |

Continued...

## Dunlop Butynol Adhesive (Ardex)

|      |  |
|------|--|
| H313 | May be harmful in contact with skin                                |
| H333 | May be harmful if inhaled  |
| H315 | Causes skin irritation.  |
| H319 | Causes serious eye irritation.                                     |
| H361 | Suspected of damaging fertility or the unborn child.               |
| H336 | May cause drowsiness or dizziness.                                 |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H304 | May be fatal if swallowed and enters airways.                      |
| H411 | Toxic to aquatic life with long lasting effects.                   |

### Precautionary statement(s) Prevention

|      |  |
|------|--|
| P201 | Obtain special instructions before use.                            |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray.                   |
| P271 | Use only outdoors or in a well-ventilated area.                    |

### Precautionary statement(s) Response

|           |   |
|-----------|---|
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention.              |
| P331      | Do NOT induce vomiting.   |
| P362      | Take off contaminated clothing and wash before reuse.               |

### Precautionary statement(s) Storage

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

### 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       | 10-30     | <u>acetone</u>                                    |
| 64742-89-8.   | 10-30     | <u>solvent naphtha petroleum, light aliphatic</u> |
| 108-88-3      | 10-30     | <u>toluene</u>                                    |
| 107-83-5      | 10-30     | <u>2-methylpentane</u>                            |
| Not Available | 10-30     | resin, non-hazardous                              |
|               | balance   | Ingredients determined not to be hazardous        |

## SECTION 4 FIRST AID MEASURES

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

### 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> |

## Ingestion

- ▶ For advice, contact a Poisons Information Centre or a doctor at once.
- ▶ Urgent hospital treatment is likely to be needed.
- ▶ **If swallowed do NOT induce vomiting.**
- ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- ▶ Observe the patient carefully.
- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- ▶ Transport to hospital or doctor without delay.

## 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.

For acute or short term repeated exposures to acetone:

- ▶ Symptoms of acetone exposure approximate ethanol intoxication.
- ▶ About 20% is expired by the lungs and the rest is metabolised. Alveolar air half-life is about 4 hours following two hour inhalation at levels near the Exposure Standard; in overdose, saturable metabolism and limited clearance, prolong the elimination half-life to 25-30 hours.
- ▶ There are no known antidotes and treatment should involve the usual methods of decontamination followed by supportive care.  
[Ellenhorn and Barceloux: Medical Toxicology]

Management:

Measurement of serum and urine acetone concentrations may be useful to monitor the severity of ingestion or inhalation.

Inhalation Management:

- ▶ Maintain a clear airway, give humidified oxygen and ventilate if necessary.
- ▶ If respiratory irritation occurs, assess respiratory function and, if necessary, perform chest X-rays to check for chemical pneumonitis.
- ▶ Consider the use of steroids to reduce the inflammatory response.
- ▶ Treat pulmonary oedema with PEEP or CPAP ventilation.

Dermal Management:

- ▶ Remove any remaining contaminated clothing, place in double sealed, clear bags, label and store in secure area away from patients and staff.
- ▶ Irrigate with copious amounts of water.
- ▶ An emollient may be required.

Eye Management:

- ▶ Irrigate thoroughly with running water or saline for 15 minutes.
- ▶ Stain with fluorescein and refer to an ophthalmologist if there is any uptake of the stain.

Oral Management:

- ▶ No **GASTRIC LAVAGE OR EMETIC**
- ▶ Encourage oral fluids.

Systemic Management:

- ▶ Monitor blood glucose and arterial pH.
- ▶ Ventilate if respiratory depression occurs.
- ▶ If patient unconscious, monitor renal function.
- ▶ Symptomatic and supportive care.

The Chemical Incident Management Handbook:

Guy's and St. Thomas' Hospital Trust, 2000

BIOLOGICAL EXPOSURE INDEX

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

| Determinant      | Sampling Time | Index   | Comments |
|------------------|---------------|---------|----------|
| Acetone in urine | End of shift  | 50 mg/L | NS       |

NS: Non-specific determinant; also observed after exposure to other material

Following acute or short term repeated exposures to toluene:

- ▶ Toluene is absorbed across the alveolar barrier, the blood/air mixture being 11.2/15.6 (at 37 degrees C.) The concentration of toluene, in expired breath, is of the order of 18 ppm following sustained exposure to 100 ppm. The tissue/blood proportion is 1/3 except in adipose where the proportion is 8/10.
- ▶ Metabolism by microsomal mono-oxygenation, results in the production of hippuric acid. This may be detected in the urine in amounts between 0.5 and 2.5 g/24 hr which represents, on average 0.8 gm/gm of creatinine. The biological half-life of hippuric acid is in the order of 1-2 hours.
- ▶ Primary threat to life from ingestion and/or inhalation is respiratory failure.
- ▶ Patients should be quickly evaluated for signs of respiratory distress (eg cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> <50 mm Hg or pCO<sub>2</sub> > 50 mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial damage has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenaline) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- ▶ Lavage is indicated in patients who require decontamination; ensure use.

## BIOLOGICAL EXPOSURE INDEX - BEI

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

| Determinant            | Index              | Sampling Time                   | Comments |
|------------------------|--------------------|---------------------------------|----------|
| o-Cresol in urine      | 0.5 mg/L           | End of shift                    | B        |
| Hippuric acid in urine | 1.6 g/g creatinine | End of shift                    | B, NS    |
| Toluene in blood       | 0.05 mg/L          | Prior to last shift of workweek |          |

NS: Non-specific determinant; also observed after exposure to other material

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

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

## Dunlop Butynol Adhesive (Ardex)

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### 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 in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> </ul>   |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> <li>▶ Severe fire hazard when exposed to heat, flame and/or oxidisers.</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> </ul> <p>Combustion products include:</p> <p>carbon dioxide (CO<sub>2</sub>)</p> <p>other pyrolysis products typical of burning organic material.</p> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.</p> <p>May emit clouds of acrid smoke</p> |

## 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> </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> </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>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul>  |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers in approved flame-proof area.</li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>▶ Keep containers securely sealed.</li> </ul> |

### Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <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.</li> </ul> |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> <li>▶ Avoid strong acids, bases.</li> </ul>  |

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Dunlop Butynol Adhesive (Ardex)

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

| Source   | Ingredient                                 | Material name                   | TWA                              | STEL                              | Peak          | Notes  |
|--|--|---------------------------------|----------------------------------|-----------------------------------|---------------|--|
| New Zealand Workplace Exposure Standards (WES) | acetone                                    | Acetone                         | 1185 mg/m <sup>3</sup> / 500 ppm | 2375 mg/m <sup>3</sup> / 1000 ppm | Not Available | Exposure can also be estimated by biological monitoring. |
| New Zealand Workplace Exposure Standards (WES) | solvent naphtha petroleum, light aliphatic | Oil mist, mineral               | 5 mg/m <sup>3</sup>              | 10 mg/m <sup>3</sup>              | Not Available | Sampled by a method that does not collect vapour.        |
| New Zealand Workplace Exposure Standards (WES) | toluene                                    | Toluene                         | 188 mg/m <sup>3</sup> / 50 ppm   | Not Available                     | Not Available | Skin absorption  |
| New Zealand Workplace Exposure Standards (WES) | 2-methylpentane                            | Hexane (n-Hexane) Other isomers | 1760 mg/m <sup>3</sup> / 500 ppm | 3500 mg/m <sup>3</sup> / 1000 ppm | Not Available | Exposure can also be estimated by biological monitoring. |

#### EMERGENCY LIMITS

| Ingredient                                 | Material name   | TEEL-1        | TEEL-2        | TEEL-3        |
|--|---|---------------|---------------|---------------|
| acetone                                    | Acetone   | Not Available | Not Available | Not Available |
| solvent naphtha petroleum, light aliphatic | Rubber solvent; (Naphtha (petroleum) light aliphatic) | 264 ppm       | 1700 ppm      | 10000 ppm     |
| toluene                                    | Toluene   | Not Available | Not Available | Not Available |
| 2-methylpentane                            | Methylpentane, 2-; (Isohexane)                        | 510 ppm       | 510 ppm       | 3100 ppm      |

| Ingredient                                 | Original IDLH | Revised IDLH    |
|--|---------------|-----------------|
| acetone                                    | 20,000 ppm    | 2,500 [LEL] ppm |
| solvent naphtha petroleum, light aliphatic | Not Available | Not Available   |
| toluene                                    | 2,000 ppm     | 500 ppm         |
| 2-methylpentane                            | Not Available | Not Available   |
| resin, non-hazardous                       | Not Available | Not Available   |

### Exposure controls

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | <p><b>CARE:</b> Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear</p> <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. 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> |
| <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.</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 to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p>   |
| <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> </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).</p> <p>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.</p>   |
| <b>Thermal hazards</b>                  | 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:

Dunlop Butynol Adhesive (Ardex)

| Material          | CPI |
|-------------------|-----|
| BUTYL             | C   |
| BUTYL/NEOPRENE    | C   |
| CPE               | C   |
| HYPALON           | C   |
| NATURAL RUBBER    | C   |
| NATURAL+NEOPRENE  | C   |
| NEOPRENE          | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | 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/CHLOROBUTYL | C   |
| VITON/NEOPRENE    | C   |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

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

**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  |
| 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(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)

**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.**

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

|   |  |  |                |
|---|--|--|----------------|
| <b>Appearance</b>                                   | Viscous uncoloured highly flammable liquid with a characteristic odour; partly mix with water. |  |                |
| <b>Physical state</b>                               | Liquid   | <b>Relative density (Water = 1)</b>            | -0.8           |
| <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>          | Not Available  |
| <b>pH (as supplied)</b>                             | Not Applicable   | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Applicable   | <b>Viscosity (cSt)</b>                         | 304-352 @ 25C  |
| <b>Initial boiling point and boiling range (°C)</b> | 56-135   | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | -15  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available  | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | HIGHLY FLAMMABLE.  | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Available  | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | Not Available  | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Applicable   | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Partly miscible  | <b>pH as a solution (1%)</b>                   | Not Applicable |
| <b>Vapour density (Air = 1)</b>                     | Not Available  | <b>VOC g/L</b>                                 | 906.3          |

**SECTION 10 STABILITY AND REACTIVITY**

## Dunlop Butynol Adhesive (Ardex)

|   |  |
|---|--|
| <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>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>The acute toxicity of inhaled alkylbenzenes is best described by central nervous system depression. As a rule, these compounds may also act as general anaesthetics.</p> <p>Systemic poisoning produced by general anaesthesia is characterised by lightheadedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, tinnitus, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness and respiratory depression and arrest. Cardiac arrest may result from cardiovascular collapse.</p> <p>2-methylpentane has not shown to damage the nervous system (unlike n-hexane).</p> <p>Nerve damage can be caused by some non-ring hydrocarbons. Symptoms are temporary, and include weakness, tremors, increased saliva, some convulsions, excessive tears with discolouration and inco-ordination lasting up to 24 hours.</p> <p>Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor.</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.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> <p>Effects of exposure to acetone by inhalation include central nervous system depression, light-headedness, unintelligible speech, inco-ordination, stupor, low blood pressure, fast heart rate, metabolic acidosis, high blood sugar and ketosis. Rarely, there may be convulsions and death of kidney tubules.</p> <p>Ketone vapours irritate the nose, throat and mucous membrane. High concentrations depress the central nervous system, causing headache, vertigo, poor concentration, sleep and failure of the heart and breathing.</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.</p> |
| <b>Ingestion</b>    | <p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea.</p> <p>Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing, abdominal swelling, unconsciousness and convulsions.</p> <p>Chronic inhalation or skin exposure to n-hexane may cause damage to nerve ends in extremities, e.g. finger, toes with loss of sensation.</p>   |
| <b>Skin Contact</b> | <p>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>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>Skin absorption of 2-methylpentane from laboratory studies is slower compared to toluene.</p> <p>Skin exposure to isoparaffins may produce slight to moderate irritation in animals and humans. Rare sensitisation reactions in humans have occurred.</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 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>   |
| <b>Eye</b>          | <p>Direct eye contact with petroleum hydrocarbons can be painful, and the corneal epithelium may be temporarily damaged. Aromatic species can cause irritation and excessive tear secretion.</p> <p>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.</p> <p>The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration</p>  |

## Dunlop Butynol Adhesive (Ardex)

|                |  |
|----------------|--|
| <b>Chronic</b> | Harmful: danger of serious damage to health by prolonged exposure through inhalation.  |
|                | This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.  |
|                | Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.   |
|                | Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.  |
|                | Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.   |
|                | There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.   |
|                | Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.   |
|                | Intentional abuse (glue sniffing) or occupational exposure to toluene can result in chronic habituation. Chronic abuse has caused inco-ordination, tremors of the extremities (due to widespread cerebrum withering), headache, abnormal speech, temporary memory loss, convulsions, coma, drowsiness, reduced colour perception, blindness, nystagmus (rapid, involuntary eye movements), hearing loss leading to deafness and mild dementia. |
|                | Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.  |
|                | Workers exposed to acetone for long periods showed inflammation of the airways, stomach and small bowel, attacks of giddiness and loss of strength. Exposure to acetone may enhance the liver toxicity of chlorinated solvents.  |

| Dunlop Butynol Adhesive (Ardex)                   | TOXICITY   | IRRITATION                         |
|---|--|------------------------------------|
|   | Not Available  | Not Available                      |
| <b>acetone</b>                                    | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|   | Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>     | Eye (human): 500 ppm - irritant    |
|   | Inhalation (rat) LC50: 50.1 mg/L/8 hr <sup>[2]</sup> | Eye (rabbit): 20mg/24hr - moderate |
|   | Oral (rat) LD50: 5800 mg/kg <sup>[2]</sup>           | Eye (rabbit): 3.95 mg - SEVERE     |
|   |  | Skin (rabbit): 500 mg/24hr - mild  |
|   |  | Skin (rabbit):395mg (open) - mild  |
| <b>solvent naphtha petroleum, light aliphatic</b> | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|   | Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>     | Not Available                      |
|   | Oral (rat) LD50: >4500 mg/kg <sup>[1]</sup>          |                                    |
| <b>toluene</b>                                    | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|   | Dermal (rabbit) LD50: 12124 mg/kg <sup>[2]</sup>     | Eye (rabbit): 2mg/24h - SEVERE     |
|   | Inhalation (rat) LC50: >26700 ppm/1hr <sup>[2]</sup> | Eye (rabbit):0.87 mg - mild        |
|   | Inhalation (rat) LC50: 49 mg/L/4hr <sup>[2]</sup>    | Eye (rabbit):100 mg/30sec - mild   |
|   | Oral (rat) LD50: 636 mg/kg <sup>[2]</sup>            | Skin (rabbit):20 mg/24h-moderate   |
|   |  | Skin (rabbit):500 mg - moderate    |
| <b>2-methylpentane</b>                            | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|   | Dermal (rabbit) LD50: >5000 mg/kg <sup>[1]</sup>     | Not Available                      |
|   | Dermal (rabbit) LD50: >5000 mg/kg <sup>[1]</sup>     |                                    |
|   | dermal (rat) LD50: >=4000 mg/kg <sup>[1]</sup>       |                                    |
|   | Oral (rat) LD50: >25000 mg/kg <sup>[1]</sup>         |                                    |
|   | Oral (rat) LD50: >25000 mg/kg <sup>[1]</sup>         |                                    |
|   | Oral (rat) LD50: >8000 mg/kg <sup>[1]</sup>          |                                    |

**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

|   |   |
|---|---|
| <b>ACETONE</b>                                    | for acetone:<br>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.   |
| <b>SOLVENT NAPHTHA PETROLEUM, LIGHT ALIPHATIC</b> | <b>for petroleum:</b><br>This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.<br>This product contains toluene. There are indications from animal studies that prolonged exposure to high concentrations of toluene may lead to hearing loss. This product contains ethyl benzene and naphthalene from which there is evidence of tumours in rodents<br><b>Carcinogenicity:</b> Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans. |
| <b>TOLUENE</b>                                    | For toluene:<br><b>Acute Toxicity</b><br>Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death. Similar effects are observed in short-term animal studies.<br><b>Humans</b> - Toluene ingestion or inhalation can result in severe central nervous system depression, and in large doses, can act as a narcotic. The ingestion of about 60 mL resulted in fatal nervous system depression within 30 minutes in one reported case.   |

## Dunlop Butynol Adhesive (Ardex)

|  |  |                                 |   |
|--|--|---------------------------------|---|
| <b>2-METHYLPENTANE</b>                   | No significant acute toxicological data identified in literature search.   |                                 |   |
| <b>ACETONE &amp; TOLUENE</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. |                                 |   |
| <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 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      |
| acetone                                    | NOEC     | 96                 | Algae or other aquatic plants | 4.950mg/L  | 4      |
| solvent naphtha petroleum, light aliphatic | EC50     | 72                 | Algae or other aquatic plants | =6.5mg/L   | 1      |
| solvent naphtha petroleum, light aliphatic | EC50     | 72                 | Algae or other aquatic plants | =6.5mg/L   | 1      |
| solvent naphtha petroleum, light aliphatic | NOEC     | 72                 | Algae or other aquatic plants | <0.1mg/L   | 1      |
| toluene                                    | LC50     | 96                 | Fish                          | 0.0073mg/L | 4      |
| toluene                                    | EC50     | 48                 | Crustacea                     | 3.78mg/L   | 5      |
| toluene                                    | EC50     | 72                 | Algae or other aquatic plants | 12.5mg/L   | 4      |
| toluene                                    | BCF      | 24                 | Algae or other aquatic plants | 10mg/L     | 4      |
| toluene                                    | EC50     | 384                | Crustacea                     | 1.533mg/L  | 3      |
| toluene                                    | NOEC     | 168                | Crustacea                     | 0.74mg/L   | 5      |
| 2-methylpentane                            | LC50     | 96                 | Fish                          | 1.915mg/L  | 3      |
| 2-methylpentane                            | EC50     | 96                 | Algae or other aquatic plants | 3.635mg/L  | 3      |
| 2-methylpentane                            | EC50     | 384                | Crustacea                     | 0.472mg/L  | 3      |

**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

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

**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) |
| toluene         | LOW (Half-life = 28 days) | LOW (Half-life = 4.33 days)      |
| 2-methylpentane | LOW                       | LOW                              |

## Bioaccumulative potential

| Ingredient      | Bioaccumulation       |
|-----------------|-----------------------|
| acetone         | LOW (BCF = 0.69)      |
| toluene         | LOW (BCF = 90)        |
| 2-methylpentane | LOW (LogKOW = 3.2145) |

## Mobility in soil

| Ingredient      | Mobility           |
|-----------------|--------------------|
| acetone         | HIGH (KOC = 1.981) |
| toluene         | LOW (KOC = 268)    |
| 2-methylpentane | LOW (KOC = 124.9)  |

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

|                                     |   |
|-------------------------------------|---|
| <b>Product / Packaging disposal</b> | <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.</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> </ul> <ul style="list-style-type: none"> <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 licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).</li> <li>▶ Decontaminate empty containers.</li> </ul> |
|-------------------------------------|---|

Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

|                  |   |
|------------------|---|
|                  |  |
| Marine Pollutant |  |
| HAZCHEM          | ☛3YE  |

### Land transport (UN)

|                              |   |                    |                |                  |                |
|------------------------------|---|--------------------|----------------|------------------|----------------|
| UN number                    | 1133  |                    |                |                  |                |
| UN proper shipping name      | ADHESIVES containing flammable liquid   |                    |                |                  |                |
| Transport hazard class(es)   | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Class</td> <td style="border-left: 1px dashed black;">3</td> </tr> <tr> <td>Subrisk</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> </table>                         | Class              | 3              | Subrisk          | Not Applicable |
| Class                        | 3   |                    |                |                  |                |
| Subrisk                      | Not Applicable  |                    |                |                  |                |
| Packing group                | II  |                    |                |                  |                |
| Environmental hazard         | Not Applicable  |                    |                |                  |                |
| Special precautions for user | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Special provisions</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> <tr> <td>Limited quantity</td> <td style="border-left: 1px dashed black;">5 L</td> </tr> </table> | Special provisions | Not Applicable | Limited quantity | 5 L            |
| Special provisions           | Not Applicable  |                    |                |                  |                |
| Limited quantity             | 5 L   |                    |                |                  |                |

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

|                                 |   |                    |    |                                 |                |          |    |
|---------------------------------|---|--------------------|----|---------------------------------|----------------|----------|----|
| UN number                       | 1133  |                    |    |                                 |                |          |    |
| UN proper shipping name         | Adhesives containing flammable liquid   |                    |    |                                 |                |          |    |
| Transport hazard class(es)      | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">ICAO/IATA Class</td> <td style="border-left: 1px dashed black;">3</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td style="border-left: 1px dashed black;">3L</td> </tr> </table> | ICAO/IATA Class    | 3  | ICAO / IATA Subrisk             | Not Applicable | ERG Code | 3L |
| ICAO/IATA Class                 | 3   |                    |    |                                 |                |          |    |
| ICAO / IATA Subrisk             | Not Applicable  |                    |    |                                 |                |          |    |
| ERG Code                        | 3L  |                    |    |                                 |                |          |    |
| Packing group                   | II  |                    |    |                                 |                |          |    |
| Environmental hazard            | Not Applicable  |                    |    |                                 |                |          |    |
| Special precautions for user    | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Special provisions</td> <td style="border-left: 1px dashed black;">A3</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td style="border-left: 1px dashed black;">364</td> </tr> </table>  | Special provisions | A3 | Cargo Only Packing Instructions | 364            |          |    |
| Special provisions              | A3  |                    |    |                                 |                |          |    |
| Cargo Only Packing Instructions | 364   |                    |    |                                 |                |          |    |

## Dunlop Butynol Adhesive (Ardex)

|   |      |
|---|------|
| Cargo Only Maximum Qty / Pack                             | 60 L |
| Passenger and Cargo Packing Instructions                  | 353  |
| Passenger and Cargo Maximum Qty / Pack                    | 5 L  |
| Passenger and Cargo Limited Quantity Packing Instructions | Y341 |
| Passenger and Cargo Limited Maximum Qty / Pack            | 1 L  |

## Sea transport (IMDG-Code / GGVSee)

|                              |                                       |                |
|------------------------------|---------------------------------------|----------------|
| UN number                    | 1133                                  |                |
| UN proper shipping name      | ADHESIVES containing flammable liquid |                |
| Transport hazard class(es)   | IMDG Class                            | 3              |
|                              | IMDG Subrisk                          | Not Applicable |
| Packing group                | II                                    |                |
| Environmental hazard         | Marine Pollutant                      |                |
| Special precautions for user | EMS Number                            | F-E, S-D       |
|                              | Special provisions                    | Not Applicable |
|                              | 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

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

| HSR Number | Group Standard  |
|------------|---|
| HSR002596  | Laboratory Chemicals and Reagent Kits Group Standard 2006                           |
| HSR002528  | Cleaning Products (Flammable) Group Standard 2006                                   |
| HSR002583  | Fuel Additives (Flammable) Group Standard 2006                                      |
| HSR002662  | Surface Coatings and Colourants (Flammable) Group Standard 2006                     |
| HSR002611  | Metal Industry Products (Flammable) Group Standard 2006                             |
| HSR002621  | N.O.S. (Flammable) Group Standard 2006  |
| HSR002641  | Polymers (Flammable) Group Standard 2006  |
| HSR002637  | Photographic Chemicals (Flammable) Group Standard 2006                              |
| HSR002495  | Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2006      |
| HSR002576  | Food Additives and Fragrance Materials (Flammable) Group Standard 2006              |
| HSR002563  | Embalming Products (Flammable) Group Standard 2006                                  |
| HSR002556  | Dental Products (Flammable) Group Standard 2006                                     |
| HSR100425  | Pharmaceutical Active Ingredients Group Standard 2010                               |
| HSR002599  | Leather and Textile Products (Flammable) Group Standard 2006                        |
| HSR002603  | Lubricants (Flammable) Group Standard 2006  |
| HSR002650  | Solvents (Flammable) Group Standard 2006  |
| HSR002552  | Cosmetic Products Group Standard 2006   |
| HSR002548  | Corrosion Inhibitors (Flammable) Group Standard 2006                                |
| HSR100757  | Veterinary Medicine (Limited Pack Size, Finished Dose) Standard 2012                |
| HSR100758  | Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2012 |
| HSR100759  | Veterinary Medicines (Non-dispersive Open System Application) Group Standard 2012   |
| HSR100628  | Straight-chained Lepidopteran Sex Pheromone Group Standard 2012                     |

## ACETONE(67-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

## SOLVENT NAPHTHA PETROLEUM, LIGHT ALIPHATIC(64742-89-8.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

New Zealand Inventory of Chemicals (NZIoC)  
New Zealand Workplace Exposure Standards (WES)

## TOLUENE(108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Inventory of Chemicals (NZIoC)  
New Zealand Workplace Exposure Standards (WES)

#### 2-METHYLPENTANE(107-83-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Workplace Exposure Standards (WES)

New Zealand Inventory of Chemicals (NZIoC)

#### Location Test Certificate

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

| Hazard Class | Quantity beyond which controls apply for closed containers                          | Quantity beyond which controls apply when use occurring in open containers |
|--------------|---|--|
| 3.1B         | 100 L in containers greater than 5 L<br>250 L in containers up to and including 5 L | 50 L<br>50 L   |

#### Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations and Regulation 9 of the Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

| Class of substance | Quantities  |
|--------------------|---|
| 3.1B               | 250 L (when in containers greater than 5 L)<br>500 L (when in containers up to and including 5 L) |

Refer Group Standards for further information

#### Tracking Requirements

Not Applicable

| National Inventory            | Status  |
|-------------------------------|---|
| Australia - AICS              | Y   |
| Canada - DSL                  | Y   |
| Canada - NDSL                 | N (toluene; acetone; solvent naphtha petroleum, light aliphatic; 2-methylpentane)   |
| China - IECSC                 | Y   |
| Europe - EINEC / ELINCS / NLP | Y   |
| Japan - ENCS                  | N (solvent naphtha petroleum, light aliphatic)  |
| Korea - KECI                  | Y   |
| New Zealand - NZIoC           | Y   |
| Philippines - PICCS           | Y   |
| USA - TSCA                    | Y   |
| <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) |

## SECTION 16 OTHER INFORMATION

#### Other information

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

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

[www.chemwatch.net](http://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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