

Altex Polyurethane Undercoat Part A

Altex Coatings Ltd

Version No: 8.12
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 4

Issue Date: 27/03/2023
Print Date: 27/03/2023
S.GHS.NZL.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

| | |
|-------------------------------|--|
| Product name | Altex Polyurethane Undercoat Part A |
| 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 | Part A of a two pack industrial coating |
|--------------------------|---|

Details of the manufacturer or supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | Altex Coatings Ltd |
| Address | 91-111 Oropi Road Tauranga 3112 New Zealand |
| Telephone | +64 7 541 1221 |
| Fax | +64 7 541 1310 |
| Website | www.altexcoatings.com |
| Email | neil.debenham@carboline.co.nz |

Emergency telephone number

| | | |
|-----------------------------------|--------------------------|-------------------------------------|
| Association / Organisation | NZ POISONS (24hr 7 days) | CHEMWATCH EMERGENCY RESPONSE (24/7) |
| Emergency telephone numbers | 0800 764766 | +64 800 700 112 |
| Other emergency telephone numbers | Not Available | +61 3 9573 3188 |

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

SECTION 2 Hazards identification

Classification of the substance or mixture

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

| | |
|--------------------|---|
| Classification [1] | Flammable Liquids Category 3, Specific Target Organ Toxicity - Repeated Exposure Category 2, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word | Warning |

Hazard statement(s)

| | |
|------|--|
| H226 | Flammable liquid and vapour. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statement(s) Prevention

Altex Polyurethane Undercoat Part A

| | |
|------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P260 | Do not breathe mist/vapours/spray. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P264 | Wash all exposed external body areas thoroughly after handling. |

Precautionary statement(s) Response

| | |
|----------------|--|
| P370+P378 | In case of fire: Use alcohol resistant foam or normal protein foam to extinguish. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P314 | Get medical advice/attention if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

| | |
|------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|--|

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|--|
| 108-65-6 | 1-10 | <u>propylene glycol monomethyl ether acetate, alpha-isomer</u> |
| 763-69-9 | 1-10 | <u>ethyl-3-ethoxypropionate</u> |
| 123-54-6 | 1-10 | <u>2,4-pentanedione</u> |
| 1330-20-7 | 1-10 | <u>xylene</u> |
| 123-86-4 | 1-10 | <u>n-butyl acetate</u> |
| 108-10-1 | 1-10 | <u>methyl isobutyl ketone</u> |
| 141-78-6 | 1-10 | <u>ethyl acetate</u> |

Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

SECTION 4 First aid measures

Description of first aid measures

| | |
|---------------------|--|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Quickly but gently, wipe material off skin with a dry, clean cloth. ▶ Immediately remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▶ Transport to hospital, or doctor. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor, without delay. |

Altex Polyurethane Undercoat Part A

| | |
|------------------|---|
| Ingestion | <ul style="list-style-type: none"> ▶ IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. ▶ For advice, contact a Poisons Information Centre or a doctor. ▶ Urgent hospital treatment is likely to be needed. ▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. <p>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</p> <ul style="list-style-type: none"> ▶ INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. <p>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |
|------------------|---|

Indication of any immediate medical attention and special treatment needed

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.

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.

Special hazards arising from the substrate or mixture

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

Advice for firefighters

| | |
|------------------------------|---|
| Fire Fighting | |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Liquid and vapour are flammable. ▶ Moderate fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. ▶ Moderate explosion hazard when exposed to heat or flame. ▶ Vapour may travel a considerable distance to source of ignition. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) other pyrolysis products typical of burning organic material.</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

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. ▶ Contain and absorb small quantities with vermiculite or other absorbent material. ▶ Wipe up. ▶ Collect residues in a flammable waste container. |
| Major Spills | <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course. ▶ Stop leak if safe to do so. ▶ Contain spill with sand, earth or vermiculite. ▶ Collect recoverable product into labelled containers for recycling. ▶ Neutralise/decontaminate residue (see Section 13 for specific agent). ▶ Collect solid residues and seal in labelled drums for disposal. ▶ Wash area and prevent runoff into drains. |

Altex Polyurethane Undercoat Part A

- ▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling

| | |
|--------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of overexposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ Avoid smoking, naked lights or ignition sources. ▶ Avoid generation of static electricity. ▶ DO NOT use plastic buckets. ▶ Earth all lines and equipment. ▶ Use spark-free tools when handling. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ Keep containers securely sealed when not in use. ▶ Avoid physical damage to containers. ▶ Always wash hands with soap and water after handling. ▶ Work clothes should be laundered separately. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers in approved flammable liquid storage area. ▶ Store away from incompatible materials in a cool, dry, well-ventilated area. ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped. ▶ No smoking, naked lights, heat or ignition sources. ▶ 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. ▶ Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. ▶ Use non-sparking ventilation systems, approved explosion proof equipment and intrinsically safe electrical systems. ▶ Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers - dry chemical, foam or carbon dioxide) and flammable gas detectors. ▶ Keep adsorbents for leaks and spills readily available. ▶ Protect containers against physical damage and check regularly for leaks. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Packing as supplied by manufacturer. ▶ Plastic containers may only be used if approved for flammable liquid. ▶ Check that containers are clearly labelled and free from leaks. ▶ 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. |
| Storage incompatibility | |



X — Must not be stored together

0 — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA


| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|------------------------|---------------------------------|---------------------------------|---------------------------------|---------------|---------------|
| New Zealand Workplace Exposure Standards (WES) | xylene | Dimethylbenzene | 50 ppm / 217 mg/m ³ | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | n-butyl acetate | n-Butyl acetate | 150 ppm / 713 mg/m ³ | 950 mg/m ³ / 200 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | methyl isobutyl ketone | Hexone (Methyl isobutyl ketone) | 50 ppm / 205 mg/m ³ | 307 mg/m ³ / 75 ppm | Not Available | Not Available |

Continued...

Altex Polyurethane Undercoat Part A

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|---------------|---------------|---------------------------------|---------------|---------------|---------------|
| New Zealand Workplace Exposure Standards (WES) | ethyl acetate | Ethyl acetate | 200 ppm / 720 mg/m ³ | Not Available | Not Available | Not Available |

Exposure controls

| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. 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> <p>For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.</p> <p>Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to effectively remove the contaminant.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s (50-100 f/min.)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s (200-500 f/min.)</td> </tr> </tbody> </table> <p>Within each range the appropriate value depends on:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td> <td>2: Contaminants of high toxicity</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in motion</td> <td>4: Small hood-local control only</td> </tr> </tbody> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> <ul style="list-style-type: none"> Adequate ventilation is typically taken to be that which limits the average concentration to no more than 25% of the LEL within the building, room or enclosure containing the dangerous substance. Ventilation for plant and machinery is normally considered adequate if it limits the average concentration of any dangerous substance that might potentially be present to no more than 25% of the LEL. However, an increase up to a maximum 50% LEL can be acceptable where additional safeguards are provided to prevent the formation of a hazardous explosive atmosphere. For example, gas detectors linked to emergency shutdown of the process might be used together with maintaining or increasing the exhaust ventilation on solvent evaporating ovens and gas turbine enclosures. Temporary exhaust ventilation systems may be provided for non-routine higher-risk activities, such as cleaning, repair or maintenance in tanks or other confined spaces or in an emergency after a release. The work procedures for such activities should be carefully considered. The atmosphere should be continuously monitored to ensure that ventilation is adequate and the area remains safe. Where workers will enter the space, the ventilation should ensure that the concentration of the dangerous substance does not exceed 10% of the LEL (irrespective of the provision of suitable breathing apparatus) | Type of Contaminant: | Air Speed: | solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min.) | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion | 4: Small hood-local control only |
|---|---|----------------------|------------|--|------------------------------|---|----------------------------|--|----------------------------|------------------------|------------------------|---|---------------------------------|--|----------------------------------|----------------------------------|-------------------------------|---|----------------------------------|
| Type of Contaminant: | Air Speed: | | | | | | | | | | | | | | | | | | |
| solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min.) | | | | | | | | | | | | | | | | | | |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) | | | | | | | | | | | | | | | | | | |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) | | | | | | | | | | | | | | | | | | |
| Lower end of the range | Upper end of the range | | | | | | | | | | | | | | | | | | |
| 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | | | | | | | | | | | | | | | | | | |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | | | | | | | | | | | | | | | | | | |
| 3: Intermittent, low production. | 3: High production, heavy use | | | | | | | | | | | | | | | | | | |
| 4: Large hood or large air mass in motion | 4: Small hood-local control only | | | | | | | | | | | | | | | | | | |
| Individual protection measures, such as personal protective equipment |  | | | | | | | | | | | | | | | | | | |
| Eye and face protection | <ul style="list-style-type: none"> Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 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. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] | | | | | | | | | | | | | | | | | | |
| Skin protection | See Hand protection below | | | | | | | | | | | | | | | | | | |
| Hands/feet protection | <p>For esters:</p> <ul style="list-style-type: none"> Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials. <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. Gloves must only be worn on clean hands. After using gloves, hands should be</p> | | | | | | | | | | | | | | | | | | |

Altex Polyurethane Undercoat Part A

washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- Fair when breakthrough time < 20 min
- Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

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.

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

Body protection See Other protection below

Other protection

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- 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 an 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.

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:

Altex Polyurethane Undercoat Part A

| Material | CPI |
|-------------------|-----|
| TEFLON | B |
| BUTYL | C |
| BUTYL/NEOPRENE | C |
| CPE | C |
| HYPALON | C |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| PVDC/PE/PVDC | C |
| SARANEX-23 | C |

Respiratory protection

Type AK-P 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 5 x ES | AK-AUS / Class 1 P2 | - | AK-PAPR-AUS / Class 1 P2 |
| up to 25 x ES | Air-line* | AK-2 P2 | AK-PAPR-2 P2 |
| up to 50 x ES | - | AK-3 P2 | - |
| 50+ x ES | - | Air-line** | - |

^ - Full-face

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

- 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.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Continued...

Altex Polyurethane Undercoat Part A

| | |
|-------------------|---|
| SARANEX-23 2-PLY | C |
| VITON | C |
| VITON/BUTYL | C |
| VITON/CHLOROBUTYL | 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.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

| | | | |
|---|-------------------------|--|---------------|
| Appearance | coloured viscous liquid | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.53 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 392 |
| pH (as supplied) | Not Available | Decomposition temperature (°C) | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | 392.157 |
| Initial boiling point and boiling range (°C) | 124 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | 25 | Taste | Not Available |
| Evaporation rate | 1.5 BuAC = 1 | Explosive properties | Not Available |
| Flammability | Flammable. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | 8.6 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 1.4 | Volatile Component (%vol) | 30 |
| Vapour pressure (kPa) | 3 | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | 3.9 | VOC g/L | 479.81 |

SECTION 10 Stability and reactivity

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

SECTION 11 Toxicological information

Information on toxicological effects

| | |
|----------------|--|
| Inhaled | Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. There is strong evidence to suggest that this material can cause, if inhaled once, serious, irreversible damage of organs. |
|----------------|--|

Altex Polyurethane Undercoat Part A

| | 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. At sufficiently high doses the material may be neurotoxic (i.e. poisonous to the nervous system). | | | | | | | | | | | | | | |
|--|--|----------|------------|--|---|--|--|---|------------------------------------|---|---|--|--|--|--|
| Ingestion | Strong evidence exists that exposure to the material may cause irreversible damage (other than cancer, mutations and birth defects) following a single exposure by swallowing. The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum. At sufficiently high doses the material may be neurotoxic (i.e. poisonous to the nervous system). | | | | | | | | | | | | | | |
| Skin Contact | There is strong evidence to suggest that this material, on a single contact with skin, can cause serious, irreversible damage of organs. Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material 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. | | | | | | | | | | | | | | |
| Eye | This material can cause eye irritation and damage in some persons. | | | | | | | | | | | | | | |
| Chronic | Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material. 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. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. | | | | | | | | | | | | | | |
| Altex Polyurethane Undercoat Part A | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Not Available | Not Available | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Not Available | Not Available | | | | | | | | | | | | | | |
| propylene glycol monomethyl ether acetate, alpha-isomer | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >5000 mg/kg^[2]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Inhalation (rat) LC50: 6510.0635325 mg/l/6h^[2]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >5000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | Inhalation (rat) LC50: 6510.0635325 mg/l/6h ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >5000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| Inhalation (rat) LC50: 6510.0635325 mg/l/6h ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| ethyl-3-ethoxypropionate | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 4076 mg/kg^[2]</td> <td>Eye (rabbit): 500mg/24h - mild</td> </tr> <tr> <td>Inhalation(Rat) LC50: 1250 ppm4h^[2]</td> <td>Skin (rabbit):10 mg/24h open mild</td> </tr> <tr> <td>Oral (Rat) LD50: ~3200-5000 mg/kg^[2]</td> <td></td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 4076 mg/kg ^[2] | Eye (rabbit): 500mg/24h - mild | Inhalation(Rat) LC50: 1250 ppm4h ^[2] | Skin (rabbit):10 mg/24h open mild | Oral (Rat) LD50: ~3200-5000 mg/kg ^[2] | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 4076 mg/kg ^[2] | Eye (rabbit): 500mg/24h - mild | | | | | | | | | | | | | | |
| Inhalation(Rat) LC50: 1250 ppm4h ^[2] | Skin (rabbit):10 mg/24h open mild | | | | | | | | | | | | | | |
| Oral (Rat) LD50: ~3200-5000 mg/kg ^[2] | | | | | | | | | | | | | | | |
| 2,4-pentanedione | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 810 mg/kg^[2]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (mouse) LD50: =951 mg/kg^[2]</td> <td>Skin (rabbit): 0.476 - SEVERE</td> </tr> <tr> <td>Oral (rat) LD50: =760 mg/kg^[2]</td> <td>Skin (rabbit): 10 mg/24h</td> </tr> <tr> <td>Oral (rat) LD50: =800 mg/kg^[2]</td> <td>Skin (rabbit): 488 mg - mild</td> </tr> <tr> <td>Oral (rat) LD50: 55 mg/kg^[2]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: 970 mg/kg^[2]</td> <td></td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 810 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | Oral (mouse) LD50: =951 mg/kg ^[2] | Skin (rabbit): 0.476 - SEVERE | Oral (rat) LD50: =760 mg/kg ^[2] | Skin (rabbit): 10 mg/24h | Oral (rat) LD50: =800 mg/kg ^[2] | Skin (rabbit): 488 mg - mild | Oral (rat) LD50: 55 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | Oral (rat) LD50: 970 mg/kg ^[2] | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 810 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| Oral (mouse) LD50: =951 mg/kg ^[2] | Skin (rabbit): 0.476 - SEVERE | | | | | | | | | | | | | | |
| Oral (rat) LD50: =760 mg/kg ^[2] | Skin (rabbit): 10 mg/24h | | | | | | | | | | | | | | |
| Oral (rat) LD50: =800 mg/kg ^[2] | Skin (rabbit): 488 mg - mild | | | | | | | | | | | | | | |
| Oral (rat) LD50: 55 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| Oral (rat) LD50: 970 mg/kg ^[2] | | | | | | | | | | | | | | | |
| xylene | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >1700 mg/kg^[2]</td> <td>Eye (human): 200 ppm irritant</td> </tr> <tr> <td>Inhalation (rat) LC50: 4994.295 mg/l/4h^[2]</td> <td>Eye (rabbit): 5 mg/24h SEVERE</td> </tr> <tr> <td>Oral (mouse) LD50: 2119 mg/kg^[2]</td> <td>Eye (rabbit): 87 mg mild</td> </tr> <tr> <td>Oral (rat) LD50: 3523-8700 mg/kg^[2]</td> <td>Eye: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: 4300 mg/kg^[2]</td> <td>Skin (rabbit):500 mg/24h moderate</td> </tr> <tr> <td></td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >1700 mg/kg ^[2] | Eye (human): 200 ppm irritant | Inhalation (rat) LC50: 4994.295 mg/l/4h ^[2] | Eye (rabbit): 5 mg/24h SEVERE | Oral (mouse) LD50: 2119 mg/kg ^[2] | Eye (rabbit): 87 mg mild | Oral (rat) LD50: 3523-8700 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] | Oral (rat) LD50: 4300 mg/kg ^[2] | Skin (rabbit):500 mg/24h moderate | | Skin: adverse effect observed (irritating) ^[1] |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >1700 mg/kg ^[2] | Eye (human): 200 ppm irritant | | | | | | | | | | | | | | |
| Inhalation (rat) LC50: 4994.295 mg/l/4h ^[2] | Eye (rabbit): 5 mg/24h SEVERE | | | | | | | | | | | | | | |
| Oral (mouse) LD50: 2119 mg/kg ^[2] | Eye (rabbit): 87 mg mild | | | | | | | | | | | | | | |
| Oral (rat) LD50: 3523-8700 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | |
| Oral (rat) LD50: 4300 mg/kg ^[2] | Skin (rabbit):500 mg/24h moderate | | | | | | | | | | | | | | |
| | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | |
| n-butyl acetate | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 3200 mg/kg^[2]</td> <td>Eye (human): 300 mg</td> </tr> <tr> <td>Inhalation (rat) LC50: 389.55501 mg/l/4h^[2]</td> <td>Eye (rabbit): 20 mg (open)-SEVERE</td> </tr> <tr> <td>Oral (guinea pig) LD50: 4700 mg/kg^[2]</td> <td>Eye (rabbit): 20 mg/24h - moderate</td> </tr> <tr> <td>Oral (rabbit) LD50: 3200 mg/kg^[2]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: =10700 mg/kg^[2]</td> <td>Skin (rabbit): 500 mg/24h-moderate</td> </tr> <tr> <td>Oral (rat) LD50: =12700 mg/kg^[2]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 3200 mg/kg ^[2] | Eye (human): 300 mg | Inhalation (rat) LC50: 389.55501 mg/l/4h ^[2] | Eye (rabbit): 20 mg (open)-SEVERE | Oral (guinea pig) LD50: 4700 mg/kg ^[2] | Eye (rabbit): 20 mg/24h - moderate | Oral (rabbit) LD50: 3200 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | Oral (rat) LD50: =10700 mg/kg ^[2] | Skin (rabbit): 500 mg/24h-moderate | Oral (rat) LD50: =12700 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 3200 mg/kg ^[2] | Eye (human): 300 mg | | | | | | | | | | | | | | |
| Inhalation (rat) LC50: 389.55501 mg/l/4h ^[2] | Eye (rabbit): 20 mg (open)-SEVERE | | | | | | | | | | | | | | |
| Oral (guinea pig) LD50: 4700 mg/kg ^[2] | Eye (rabbit): 20 mg/24h - moderate | | | | | | | | | | | | | | |
| Oral (rabbit) LD50: 3200 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| Oral (rat) LD50: =10700 mg/kg ^[2] | Skin (rabbit): 500 mg/24h-moderate | | | | | | | | | | | | | | |
| Oral (rat) LD50: =12700 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |

Altex Polyurethane Undercoat Part A

| | | |
|------------------------|---|--|
| | Oral (rat) LD50: 10768 mg/kg ^[2] | |
| | Oral (rat) LD50: 13100 mg/kg ^[2] | |
| methyl isobutyl ketone | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >16000 mg/kg ^[1] | Eye (human): 200 ppm/15m |
| | Inhalation(Rat) LC50: ~8.2-16.4 mg/l/4h ^[2] | Eye (rabbit): 40 mg - SEVERE |
| | Oral (Rat) LD50: 2080 mg/kg ^[2] | Eye (rabbit): 500 mg/24h - mild |
| | | Skin (rabbit): 500 mg/24h - mild |
| ethyl acetate | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: 3196.3488 mg/l/8h ^[2] | Eye (human): 400 ppm |
| | Oral (guinea pig) LD50: 5500 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] |
| | Oral (mouse) LD50: 4100 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] |
| | Oral (rat) LD50: 5620 mg/kg ^[2] | |
| 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 | |

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

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

| | | | | | |
|---|-----------------|---------------------------|-------------------------------|---------------|---------------|
| Altex Polyurethane Undercoat Part A | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96h | Fish | 100mg/l | 1 |
| | EC50 | 72h | Algae or other aquatic plants | >1000mg/l | 2 |
| | EC50 | 48h | Crustacea | 373mg/l | 2 |
| | NOEC(ECx) | 336h | Fish | 47.5mg/l | 2 |
| ethyl-3-ethoxypropionate | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50(ECx) | 48h | Crustacea | 970mg/l | 1 |
| | EC50 | 72h | Algae or other aquatic plants | >114.86mg/l | 2 |
| | LC50 | 96h | Fish | 45.3mg/l | 2 |
| 2,4-pentanedione | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96h | Fish | 50.3-71.8mg/l | 4 |
| | EC50 | 72h | Algae or other aquatic plants | 8.36mg/l | 2 |
| | EC50 | 48h | Crustacea | 25.9mg/l | 2 |
| xylene | Endpoint | Test Duration (hr) | Species | Value | Source |
| | LC50 | 96h | Fish | 2.6mg/l | 2 |
| | EC50 | 72h | Algae or other aquatic plants | 4.6mg/l | 2 |
| | NOEC(ECx) | 73h | Algae or other aquatic plants | 0.44mg/l | 2 |

Continued...

Altex Polyurethane Undercoat Part A

| n-butyl acetate | Endpoint | Test Duration (hr) | Species | Value | Source |
|-----------------|-----------|--------------------|-------------------------------|-----------|--------|
| | LC50 | 96h | Fish | 17-19mg/l | 4 |
| | EC50 | 72h | Algae or other aquatic plants | 246mg/l | 2 |
| | EC50 | 48h | Crustacea | 32mg/l | 1 |
| | EC50(ECx) | 96h | Fish | 18mg/l | 2 |

| methyl isobutyl ketone | Endpoint | Test Duration (hr) | Species | Value | Source |
|------------------------|-----------|--------------------|-------------------------------|----------|--------|
| | LC50 | 96h | Fish | >179mg/l | 2 |
| | EC50 | 48h | Crustacea | 170mg/l | 1 |
| | EC50(ECx) | 48h | Crustacea | 170mg/l | 1 |
| | EC50 | 96h | Algae or other aquatic plants | 400mg/l | 1 |

| ethyl acetate | Endpoint | Test Duration (hr) | Species | Value | Source |
|---------------|-----------|--------------------|-------------------------------|---------------|--------|
| | LC50 | 96h | Fish | >75.6mg/l | 2 |
| | EC50 | 72h | Algae or other aquatic plants | 1800-3200mg/l | 4 |
| | EC50 | 48h | Crustacea | 164mg/l | 1 |
| | EC50 | 96h | Algae or other aquatic plants | 2500mg/l | 4 |
| | NOEC(ECx) | 72h | Algae or other aquatic plants | >100mg/l | 1 |

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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*

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|------------------------------|------------------------------|
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW | LOW |
| ethyl-3-ethoxypropionate | LOW | LOW |
| 2,4-pentanedione | LOW | LOW |
| xylene | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |
| n-butyl acetate | LOW | LOW |
| methyl isobutyl ketone | HIGH (Half-life = 7001 days) | LOW (Half-life = 1.9 days) |
| ethyl acetate | LOW (Half-life = 14 days) | LOW (Half-life = 14.71 days) |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|-----------------------|
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW (LogKOW = 0.56) |
| ethyl-3-ethoxypropionate | LOW (LogKOW = 1.0809) |
| 2,4-pentanedione | LOW (LogKOW = 0.4) |
| xylene | MEDIUM (BCF = 740) |
| n-butyl acetate | LOW (BCF = 14) |
| methyl isobutyl ketone | LOW (LogKOW = 1.31) |
| ethyl acetate | HIGH (BCF = 3300) |

Mobility in soil

| Ingredient | Mobility |
|---|--------------------|
| propylene glycol monomethyl ether acetate, alpha-isomer | HIGH (KOC = 1.838) |
| ethyl-3-ethoxypropionate | LOW (KOC = 10) |
| 2,4-pentanedione | HIGH (KOC = 1) |
| n-butyl acetate | LOW (KOC = 20.86) |
| methyl isobutyl ketone | LOW (KOC = 10.91) |
| ethyl acetate | LOW (KOC = 6.131) |

SECTION 13 Disposal considerations

Waste treatment methods

Altex Polyurethane Undercoat Part A

| | |
|-------------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▶ Containers may still present a chemical hazard/ danger when empty. ▶ Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> ▶ 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. ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. 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"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible. ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material). ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed. |
|-------------------------------------|--|

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. DO NOT deposit the hazardous substance into or onto a landfill or a sewage facility.

Burning the hazardous substance must happen under controlled conditions with no person or place exposed to


(1) a blast overpressure of more than 9 kPa; or

(2) an unsafe level of heat radiation.

The disposed hazardous substance must not come into contact with class 1 or 5 substances.

SECTION 14 Transport information

Labels Required

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

Land transport (UN)

| | | |
|-------------------------------------|--|----------------|
| UN number or ID 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 |
| | Subsidiary risk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | Special provisions | 163; 223; 367 |
| | Limited quantity | 5 L |

Air transport (ICAO-IATA / DGR)

| | | |
|-----------------------------------|---|----------------|
| UN number | 1263 | |
| UN proper shipping name | Paint related material (including paint thinning or reducing compounds); Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) | |
| Transport hazard class(es) | ICAO/IATA Class | 3 |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | 3L |
| Packing group | III | |

Altex Polyurethane Undercoat Part A

| | | |
|-------------------------------------|---|-------------|
| Environmental hazard | Not Applicable | |
| Special precautions for user | Special provisions | A3 A72 A192 |
| | Cargo Only Packing Instructions | 366 |
| | Cargo Only Maximum Qty / Pack | 220 L |
| | Passenger and Cargo Packing Instructions | 355 |
| | Passenger and Cargo Maximum Qty / Pack | 60 L |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y344 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 10 L |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|--|-----------------|
| UN number | 1263 | |
| 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 |
| | IMDG Subrisk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | 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

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

| HSR Number | Group Standard |
|------------|---|
| HSR002662 | Surface Coatings and Colourants Flammable Group Standard 2020 |

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantity (Closed Containers) | Quantity (Open Containers) |
|-----------------------------|---|----------------------------|
| Flammable Liquid Category 3 | 500 L in containers more than 5 L | 250 L |
| Flammable Liquid Category 3 | 1 500 L in containers up to and including 5 L | 250 L |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

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

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Gas (aggregate water capacity in mL) | Liquid (L) | Solid (kg) | Maximum quantity per package for each classification |
|-----------------------------|--------------------------------------|------------|------------|--|
| Flammable Liquid Category 3 | | | | 10 L |

Continued...

Altex Polyurethane Undercoat Part A

Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status |
|--|---|
| Australia - AIIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (propylene glycol monomethyl ether acetate, alpha-isomer; ethyl-3-ethoxypropionate; 2,4-pentanedione; xylene; n-butyl acetate; methyl isobutyl ketone; ethyl acetate) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

SECTION 16 Other information

| | |
|----------------------|------------|
| Revision Date | 27/03/2023 |
| Initial Date | 06/11/2017 |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|--|
| 7.12 | 27/03/2023 | Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), First Aid measures - Advice to Doctor, Toxicological information - Chronic Health, Hazards identification - Classification, Ecological Information - Environmental, Exposure controls / personal protection - Exposure Standard, Firefighting measures - Fire Fighter (extinguishing media), Firefighting measures - Fire Fighter (fire/explosion hazard), First Aid measures - First Aid (skin), First Aid measures - First Aid (swallowed), Handling and storage - Handling Procedure, Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (Respirator), Exposure controls / personal protection - Personal Protection (hands/feet), Handling and storage - Storage (storage incompatibility) |

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.

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
 ES: Exposure Standard
 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
 AIIIC: Australian Inventory of Industrial Chemicals
 DSL: Domestic Substances List
 NDSL: Non-Domestic Substances List
 IECSC: Inventory of Existing Chemical Substance in China
 EINECS: European Inventory of Existing Commercial chemical Substances
 ELINCS: European List of Notified Chemical Substances
 NLP: No-Longer Polymers
 ENCS: Existing and New Chemical Substances Inventory
 KECI: Korea Existing Chemicals Inventory
 NZIoC: New Zealand Inventory of Chemicals
 PICCS: Philippine Inventory of Chemicals and Chemical Substances

Altex Polyurethane Undercoat Part A

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.

Altex Polyurethane Undercoat Part B

Altex Coatings Ltd

Chemwatch Hazard Alert Code: 4

Version No: 7.15

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: 14/08/2022

Print Date: 14/08/2022

S.GHS.NZL.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

| | |
|-------------------------------|--|
| Product name | Altex Polyurethane Undercoat Part B |
| 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 | Part B of a two pack industrial coating |
|--------------------------|---|

Details of the supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | Altex Coatings Ltd |
| Address | 91-111 Oropi Road Tauranga 3112 New Zealand |
| Telephone | +64 7 541 1221 |
| Fax | +64 7 541 1310 |
| Website | www.altexcoatings.com |
| Email | neil.debenham@carboline.co.nz |

Emergency telephone number

| | | |
|-----------------------------------|--------------------------|------------------------------|
| Association / Organisation | NZ POISONS (24hr 7 days) | CHEMWATCH EMERGENCY RESPONSE |
| Emergency telephone numbers | 0800 764766 | +64 800 700 112 |
| Other emergency telephone numbers | Not Available | +61 3 9573 3188 |

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

SECTION 2 Hazards identification

Classification of the substance or mixture

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

| | |
|--------------------|--|
| Classification [1] | Flammable Liquids Category 3, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Repeated Exposure Category 2, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Sensitisation (Skin) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word | Danger |

Hazard statement(s)

| | |
|------|---|
| H226 | Flammable liquid and vapour. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure. (Inhalation) |
| H335 | May cause respiratory irritation. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |

Altex Polyurethane Undercoat Part B

| | |
|------|--|
| H317 | May cause an allergic skin reaction. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statement(s) Prevention

| | |
|------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P260 | Do not breathe mist/vapours/spray. |
| P271 | Use only a well-ventilated area. |
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P284 | [In case of inadequate ventilation] wear respiratory protection. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P273 | Avoid release to the environment. |
| P264 | Wash all exposed external body areas thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

Precautionary statement(s) Response

| | |
|----------------|--|
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider. |
| P370+P378 | In case of fire: Use alcohol resistant foam or normal protein foam to extinguish. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |

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 to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|--|

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-------------|-----------|--|
| 108-65-6 | 50-60 | <u>propylene glycol monomethyl ether acetate, alpha-isomer</u> |
| 123-86-4 | 1-10 | <u>n-butyl acetate</u> |
| 64742-95-6. | 1-10 | <u>naphtha petroleum, light aromatic solvent</u> |
| 822-06-0 | <=0.2 | <u>hexamethylene diisocyanate</u> |

Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

SECTION 4 First aid measures

Description of first aid measures

| | |
|--------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). |

Continued...

Altex Polyurethane Undercoat Part B

| | |
|-------------------|---|
| | <ul style="list-style-type: none"> ▶ Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor, without delay. <p>Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.</p> |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. |

Indication of any immediate medical attention and special treatment needed

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.

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.

Special hazards arising from the substrate or mixture

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

Advice for firefighters

| | |
|------------------------------|---|
| Fire Fighting | |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Liquid and vapour are flammable. ▶ Moderate fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. ▶ Moderate explosion hazard when exposed to heat or flame. ▶ Vapour may travel a considerable distance to source of ignition. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include: carbon dioxide (CO₂) carbon monoxide (CO) isocyanates and minor amounts of hydrogen cyanide nitrogen oxides (NO_x) other pyrolysis products typical of burning organic material.</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

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. ▶ Contain and absorb small quantities with vermiculite or other absorbent material. ▶ Wipe up. ▶ Collect residues in a flammable waste container. |
| Major Spills | <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by all means available, spillage from entering drains or water courses. |

Altex Polyurethane Undercoat Part B

- ▶ Consider evacuation (or protect in place).
- ▶ No smoking, naked lights or ignition sources.
- ▶ Increase ventilation.
- ▶ Stop leak if safe to do so.
- ▶ Water spray or fog may be used to disperse / absorb vapour.
- ▶ Contain or absorb spill with sand, earth or vermiculite.
- ▶ Collect recoverable product into labelled containers for recycling.
- ▶ Collect solid residues and seal in labelled drums for disposal.
- ▶ Wash area and prevent runoff into drains.
- ▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling

| | |
|--------------------------|---|
| Safe handling | <ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of overexposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ Avoid smoking, naked lights or ignition sources. ▶ Avoid generation of static electricity. ▶ DO NOT use plastic buckets. ▶ Earth all lines and equipment. ▶ Use spark-free tools when handling. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ Keep containers securely sealed when not in use. ▶ Avoid physical damage to containers. ▶ Always wash hands with soap and water after handling. ▶ Work clothes should be laundered separately. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers in approved flammable liquid storage area. ▶ Store away from incompatible materials in a cool, dry, well-ventilated area. ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped. ▶ No smoking, naked lights, heat or ignition sources. ▶ 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. ▶ Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. ▶ Use non-sparking ventilation systems, approved explosion proof equipment and intrinsically safe electrical systems. ▶ Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers - dry chemical, foam or carbon dioxide) and flammable gas detectors. ▶ Keep adsorbents for leaks and spills readily available. ▶ Protect containers against physical damage and check regularly for leaks. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Packing as supplied by manufacturer. ▶ Plastic containers may only be used if approved for flammable liquid. ▶ Check that containers are clearly labelled and free from leaks. ▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure. |
| Storage incompatibility | |



X — Must not be stored together

O — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

Continued...

Altex Polyurethane Undercoat Part B

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|----------------------------|----------------------------|---------------------------------|---------------------------------|---------------|---------------|
| New Zealand Workplace Exposure Standards (WES) | n-butyl acetate | n-Butyl acetate | 150 ppm / 713 mg/m ³ | 950 mg/m ³ / 200 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | hexamethylene diisocyanate | Hexamethylene diisocyanate | 0.02 mg/m ³ | 0.07 mg/m ³ | Not Available | Not Available |

Exposure controls

| | |
|---|--|
| Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. 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> <ul style="list-style-type: none"> ▶ Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area. ▶ Work should be undertaken in an isolated system such as a 'glove-box' . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system. ▶ Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within. ▶ Open-vessel systems are prohibited. ▶ Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. ▶ Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system. ▶ For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▶ Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated areas). ▶ Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air. ▶ Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other than hands and arms, be disallowed. |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 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. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>For esters:</p> <ul style="list-style-type: none"> ▶ Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials. <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. 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.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on</p> |

Altex Polyurethane Undercoat Part B

| | |
|-------------------------|---|
| | <p>consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential <p>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.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] ▶ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent] ▶ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely. ▶ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. ▶ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▶ Overalls. ▶ PVC Apron. ▶ PVC protective suit may be required if exposure severe. ▶ Eyewash unit. ▶ Ensure there is ready access to a safety shower. ▶ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. ▶ 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 an 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. |

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:

Altex Polyurethane Undercoat Part B

| Material | CPI |
|------------------|-----|
| BUTYL | C |
| BUTYL/NEOPRENE | C |
| HYPALON | C |
| NATURAL RUBBER | C |
| NEOPRENE | C |
| NEOPRENE/NATURAL | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| SARANEX-23 | C |
| TEFLON | 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 | - | A-PAPR-AUS / Class 1 |
| up to 50 x ES | - | A-AUS / Class 1 | - |
| up to 100 x ES | - | A-2 | A-PAPR-2 ^ |

^ - Full-face

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

- ▶ 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.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Altex Polyurethane Undercoat Part B

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

| | | | |
|---|---|--|---------------|
| Appearance | Moisture sensitive. clear viscous liquid | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.06 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 286 |
| pH (as supplied) | Not Available | Decomposition temperature (°C) | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | 145 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | 44 | Taste | Not Available |
| Evaporation rate | 0.4 BuAC = 1 | Explosive properties | Not Available |
| Flammability | Flammable. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | 7.1 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 1.5 | Volatile Component (%vol) | 58 |
| Vapour pressure (kPa) | 0.4 | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (Not Available%) | Not Available |
| Vapour density (Air = 1) | 4.6 | VOC g/L | 619 |

SECTION 10 Stability and reactivity

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

SECTION 11 Toxicological information

Information on toxicological effects

| | |
|---------------------|---|
| Inhaled | <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. 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>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>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> |
| Ingestion | Accidental ingestion of the material may be damaging to the health of the individual. |
| Skin Contact | <p>This material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</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> |
| Eye | This material can cause eye irritation and damage in some persons. |

Altex Polyurethane Undercoat Part B

| Chronic | <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. There is sufficient evidence to suggest that this material directly causes cancer in humans. Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. 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.</p> | | | | | | | | | | | | | | | | | | | |
|--|--|---|------------|--|---|--|--|---|---|---|---|--|------------------------------------|--|--|---|--|---|--|--|
| | Altex Polyurethane Undercoat Part B | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Not Available | Not Available | | | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | | |
| Not Available | Not Available | | | | | | | | | | | | | | | | | | | |
| propylene glycol monomethyl ether acetate, alpha-isomer | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >5000 mg/kg^[2]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Inhalation (rat) LC50: 6510.0635325 mg/l/6h^[2]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >5000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | Inhalation (rat) LC50: 6510.0635325 mg/l/6h ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >5000 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Inhalation (rat) LC50: 6510.0635325 mg/l/6h ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| n-butyl acetate | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 3200 mg/kg^[2]</td> <td>Eye (human): 300 mg</td> </tr> <tr> <td>Inhalation (rat) LC50: 389.55501 mg/l/4h^[2]</td> <td>Eye (rabbit): 20 mg (open)-SEVERE</td> </tr> <tr> <td>Oral (guinea pig) LD50: 4700 mg/kg^[2]</td> <td>Eye (rabbit): 20 mg/24h - moderate</td> </tr> <tr> <td>Oral (rabbit) LD50: 3200 mg/kg^[2]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: =10700 mg/kg^[2]</td> <td>Skin (rabbit): 500 mg/24h-moderate</td> </tr> <tr> <td>Oral (rat) LD50: =12700 mg/kg^[2]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: 10768 mg/kg^[2]</td> <td></td> </tr> <tr> <td>Oral (rat) LD50: 13100 mg/kg^[2]</td> <td></td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 3200 mg/kg ^[2] | Eye (human): 300 mg | Inhalation (rat) LC50: 389.55501 mg/l/4h ^[2] | Eye (rabbit): 20 mg (open)-SEVERE | Oral (guinea pig) LD50: 4700 mg/kg ^[2] | Eye (rabbit): 20 mg/24h - moderate | Oral (rabbit) LD50: 3200 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | Oral (rat) LD50: =10700 mg/kg ^[2] | Skin (rabbit): 500 mg/24h-moderate | Oral (rat) LD50: =12700 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | Oral (rat) LD50: 10768 mg/kg ^[2] | | Oral (rat) LD50: 13100 mg/kg ^[2] | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 3200 mg/kg ^[2] | Eye (human): 300 mg | | | | | | | | | | | | | | | | | | | |
| Inhalation (rat) LC50: 389.55501 mg/l/4h ^[2] | Eye (rabbit): 20 mg (open)-SEVERE | | | | | | | | | | | | | | | | | | | |
| Oral (guinea pig) LD50: 4700 mg/kg ^[2] | Eye (rabbit): 20 mg/24h - moderate | | | | | | | | | | | | | | | | | | | |
| Oral (rabbit) LD50: 3200 mg/kg ^[2] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Oral (rat) LD50: =10700 mg/kg ^[2] | Skin (rabbit): 500 mg/24h-moderate | | | | | | | | | | | | | | | | | | | |
| Oral (rat) LD50: =12700 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Oral (rat) LD50: 10768 mg/kg ^[2] | | | | | | | | | | | | | | | | | | | | |
| Oral (rat) LD50: 13100 mg/kg ^[2] | | | | | | | | | | | | | | | | | | | | |
| naphtha petroleum, light aromatic solvent | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >1900 mg/kg^[1]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Inhalation(Rat) LC50; >4.42 mg/L4h^[1]</td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td>Oral (Rat) LD50; >4500 mg/kg^[1]</td> <td></td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >1900 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | Inhalation(Rat) LC50; >4.42 mg/L4h ^[1] | Skin: adverse effect observed (irritating) ^[1] | Oral (Rat) LD50; >4500 mg/kg ^[1] | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >1900 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Inhalation(Rat) LC50; >4.42 mg/L4h ^[1] | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Oral (Rat) LD50; >4500 mg/kg ^[1] | | | | | | | | | | | | | | | | | | | | |
| hexamethylene diisocyanate | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 593 mg/kg^[2]</td> <td>Eye: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td>Inhalation(Rat) LC50; 0.06 mg/L4h^[2]</td> <td>Skin: adverse effect observed (corrosive)^[1]</td> </tr> <tr> <td>Oral (Mouse) LD50; 350 mg/kg^[2]</td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 593 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] | Inhalation(Rat) LC50; 0.06 mg/L4h ^[2] | Skin: adverse effect observed (corrosive) ^[1] | Oral (Mouse) LD50; 350 mg/kg ^[2] | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 593 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| Inhalation(Rat) LC50; 0.06 mg/L4h ^[2] | Skin: adverse effect observed (corrosive) ^[1] | | | | | | | | | | | | | | | | | | | |
| Oral (Mouse) LD50; 350 mg/kg ^[2] | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | |

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

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

| | | | | | |
|--|-----------------|---------------------------|-------------------------------|---------------|---------------|
| Altex Polyurethane Undercoat Part B | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether acetate, alpha-isomer | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 72h | Algae or other aquatic plants | >1000mg/l | 2 |
| | EC50 | 48h | Crustacea | 373mg/l | 2 |
| | NOEC(ECx) | 336h | Fish | 47.5mg/l | 2 |

Continued...

Altex Polyurethane Undercoat Part B

| | | | | | |
|---|--|---------------------------|-------------------------------|--------------|---------------|
| | LC50 | 96h | Fish | 100mg/l | 1 |
| | EC50 | 96h | Algae or other aquatic plants | >1000mg/l | 2 |
| n-butyl acetate | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 72h | Algae or other aquatic plants | 246mg/l | 2 |
| | EC50 | 48h | Crustacea | 32mg/l | 1 |
| | EC50(ECx) | 96h | Fish | 18mg/l | 2 |
| | LC50 | 96h | Fish | 18mg/l | 2 |
| naphtha petroleum, light aromatic solvent | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 96h | Algae or other aquatic plants | 64mg/l | 2 |
| | NOEC(ECx) | 72h | Algae or other aquatic plants | 1mg/l | 1 |
| | EC50 | 72h | Algae or other aquatic plants | 19mg/l | 1 |
| | EC50 | 48h | Crustacea | 6.14mg/l | 1 |
| hexamethylene diisocyanate | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC0(ECx) | 24h | Crustacea | <0.33mg/l | 1 |
| | EC50 | 72h | Algae or other aquatic plants | >77.4mg/l | 2 |
| | LC50 | 96h | Fish | 22mg/l | 1 |
| Legend: | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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.

When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water. The oil film on water surface may physically affect the aquatic organisms, due to the interruption of the oxygen transfer between the air and the water

Oils of any kind can cause:

- drowning of water-fowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility
- lethal effects on fish by coating gill surfaces, preventing respiration
- asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and
- adverse aesthetic effects of fouled shoreline and beaches

In case of accidental releases on the soil, a fine film is formed on the soil, which prevents the plant respiration process and the soil particle saturation. It may cause deep water infestation.

DO NOT discharge into sewer or waterways.

Persistence and degradability

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

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|-----------------------|
| propylene glycol monomethyl ether acetate, alpha-isomer | LOW (LogKOW = 0.56) |
| n-butyl acetate | LOW (BCF = 14) |
| hexamethylene diisocyanate | LOW (LogKOW = 3.1956) |

Mobility in soil

| Ingredient | Mobility |
|---|--------------------|
| propylene glycol monomethyl ether acetate, alpha-isomer | HIGH (KOC = 1.838) |
| n-butyl acetate | LOW (KOC = 20.86) |
| hexamethylene diisocyanate | LOW (KOC = 5864) |

SECTION 13 Disposal considerations

Waste treatment methods

| | |
|-------------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: <ul style="list-style-type: none"> ▸ 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. |
|-------------------------------------|---|

Continued...

Altex Polyurethane Undercoat Part B

- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product. 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.
- A Hierarchy of Controls seems to be common - the user should investigate:
 - ▶ Reduction
 - ▶ Reuse
 - ▶ Recycling
 - ▶ Disposal (if all else fails)
- 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.
 - ▶ **DO NOT allow wash water from cleaning or process equipment to enter drains.**
 - ▶ It may be necessary to collect all wash water for treatment before disposal.
 - ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
 - ▶ Where in doubt contact the responsible authority.
 - ▶ Recycle wherever possible.
 - ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).
 - ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. DO NOT deposit the hazardous substance into or onto a landfill or a sewage facility.

Burning the hazardous substance must happen under controlled conditions with no person or place exposed to

(1) a blast overpressure of more than 9 kPa; or

(2) an unsafe level of heat radiation.

The disposed hazardous substance must not come into contact with class 1 or 5 substances.

SECTION 14 Transport information

Labels Required

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

Land transport (UN)

| | | |
|-------------------------------------|--|----------------|
| 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 |
| | Subrisk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | Special provisions | 163; 223; 367 |
| | Limited quantity | 5 L |

Air transport (ICAO-IATA / DGR)

| | | |
|-------------------------------------|---|----------------|
| UN number | 1263 | |
| UN proper shipping name | Paint related material (including paint thinning or reducing compounds); Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) | |
| Transport hazard class(es) | ICAO/IATA Class | 3 |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | 3L |
| Packing group | III | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | Special provisions | A3 A72 A192 |
| | Cargo Only Packing Instructions | 366 |

Altex Polyurethane Undercoat Part B

| | |
|---|-------|
| Cargo Only Maximum Qty / Pack | 220 L |
| Passenger and Cargo Packing Instructions | 355 |
| Passenger and Cargo Maximum Qty / Pack | 60 L |
| Passenger and Cargo Limited Quantity Packing Instructions | Y344 |
| Passenger and Cargo Limited Maximum Qty / Pack | 10 L |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|--|-----------------|
| UN number | 1263 | |
| 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 |
| | IMDG Subrisk | Not Applicable |
| Packing group | III | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | 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

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

| HSR Number | Group Standard |
|------------|---|
| HSR002662 | Surface Coatings and Colourants Flammable Group Standard 2020 |

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantity (Closed Containers) | Quantity (Open Containers) |
|-----------------------------|---|----------------------------|
| Flammable Liquid Category 3 | 500 L in containers more than 5 L | 250 L |
| Flammable Liquid Category 3 | 1 500 L in containers up to and including 5 L | 250 L |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

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

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Liquid (L) | Maximum quantity per package for each classification |
|---|------------|--|
| Respiratory Sensitisation Category 1 Skin Sensitisation Category 1 | 1 | |
| Flammable Liquid Category 3 | | 10 L |

Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status |
|--------------------|--------|
| | |

Altex Polyurethane Undercoat Part B

| National Inventory | Status |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (propylene glycol monomethyl ether acetate, alpha-isomer; n-butyl acetate; naphtha petroleum, light aromatic solvent; hexamethylene diisocyanate) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

SECTION 16 Other information

| | |
|----------------------|------------|
| Revision Date | 14/08/2022 |
| Initial Date | 06/11/2017 |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|-----------------------------|
| 6.15 | 14/08/2022 | Classification, Ingredients |

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.

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
 ES: Exposure Standard
 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
 AIIC: Australian Inventory of Industrial Chemicals
 DSL: Domestic Substances List
 NDSL: Non-Domestic Substances List
 IECSC: Inventory of Existing Chemical Substance in China
 EINECS: European Inventory of Existing Commercial chemical Substances
 ELINCS: European List of Notified Chemical Substances
 NLP: No-Longer Polymers
 ENCS: Existing and New Chemical Substances Inventory
 KECI: Korea Existing Chemicals Inventory
 NZIoC: New Zealand Inventory of Chemicals
 PICCS: Philippine Inventory of Chemicals and Chemical Substances
 TSCA: Toxic Substances Control Act
 TCSI: Taiwan Chemical Substance Inventory
 INSQ: Inventario Nacional de Sustancias Químicas
 NCI: National Chemical Inventory
 FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.