



# Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours

## Dy-Mark

Chemwatch: 4853-55  
Version No: 6.1.1.1  
Material Safety Data Sheet according to NOHSC and ADG requirements

Chemwatch Hazard Alert Code: 4

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

### Product Identifier

|                               |   |
|-------------------------------|---|
| Product name                  | Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours   |
| Synonyms                      | 230732101 Flat Black, 230732111 Flat White, 230732301 Black, 230732302 Signal Red, 230732303 Deep Ocean, 230732304 Cottage Green, 230732305 Golden Yellow, 230732307 Indian Red, 230732309 Classic Cream, 230732310 Aluminium, 230732311 White, 230732313 Machine Grey, 230732314 Ultramarine Blue B21, 230732315 Jade G21, 230732316 Deep Indian Red R64, 230732317 Orange X15 |
| Proper shipping name          | AEROSOLS  |
| Other means of identification | Not Available   |

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

|                          |   |
|--------------------------|---|
| Relevant identified uses | Application is by spray atomisation from a hand held aerosol pack<br>38aer338user |
|--------------------------|---|

### Details of the manufacturer/importer

|                         |  |
|-------------------------|--|
| Registered company name | Dy-Mark                                      |
| Address                 | 89 Formation Street Wacol 4076 QLD Australia |
| Telephone               | +61 7 3271 2222                              |
| Fax                     | +61 7 3271 2751                              |
| Website                 | Not Available                                |
| Email                   | info@dymark.com.au                           |

### Emergency telephone number

|                                   |                 |
|-----------------------------------|-----------------|
| Association / Organisation        | Not Available   |
| Emergency telephone numbers       | +61 403 186 708 |
| Other emergency telephone numbers | Not Available   |

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

|                        |   |        |   |        |                              |     |                               |     |  |     |                      |
|------------------------|---|--------|---|--------|------------------------------|-----|-------------------------------|-----|--|-----|----------------------|
| Poisons Schedule       | Not Applicable  |        |   |        |                              |     |                               |     |  |     |                      |
| Risk Phrases [1]       | <table><tr><td>R20/21</td><td>Harmful by inhalation and in contact with skin.</td></tr><tr><td>R36/38</td><td>Irritating to eyes and skin.</td></tr><tr><td>R52</td><td>Harmful to aquatic organisms.</td></tr><tr><td>R44</td><td>Risk of explosion if heated under confinement.</td></tr><tr><td>R12</td><td>Extremely flammable.</td></tr></table> | R20/21 | Harmful by inhalation and in contact with skin. | R36/38 | Irritating to eyes and skin. | R52 | Harmful to aquatic organisms. | R44 | Risk of explosion if heated under confinement. | R12 | Extremely flammable. |
| R20/21                 | Harmful by inhalation and in contact with skin.   |        |   |        |                              |     |                               |     |  |     |                      |
| R36/38                 | Irritating to eyes and skin.  |        |   |        |                              |     |                               |     |  |     |                      |
| R52                    | Harmful to aquatic organisms.   |        |   |        |                              |     |                               |     |  |     |                      |
| R44                    | Risk of explosion if heated under confinement.  |        |   |        |                              |     |                               |     |  |     |                      |
| R12                    | Extremely flammable.  |        |   |        |                              |     |                               |     |  |     |                      |
| Legend:                | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI  |        |   |        |                              |     |                               |     |  |     |                      |
| GHS Classification [1] | Flammable Aerosol Category 1, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Acute Aquatic Hazard Category 3  |        |   |        |                              |     |                               |     |  |     |                      |
| Legend:                | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI  |        |   |        |                              |     |                               |     |  |     |                      |

### Label elements

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

Continued...

|             |               |
|-------------|---------------|
| SIGNAL WORD | <b>DANGER</b> |
|-------------|---------------|

**Hazard statement(s)**

|        |   |
|--------|---|
| H222   | Extremely flammable aerosol                   |
| H312   | Harmful in contact with skin                  |
| H332   | Harmful if inhaled                            |
| H315   | Causes skin irritation                        |
| H319   | Causes serious eye irritation                 |
| H402   | Harmful to aquatic life                       |
| AUH044 | Risk of explosion if heated under confinement |

**Supplementary statement(s)**

Not Applicable

**CLP classification (additional)**

Not Applicable

**Precautionary statement(s) Prevention**

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

**Precautionary statement(s) Response**

|                |  |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312           | Call a POISON CENTER/doctor/physician/first aider/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   |

**Precautionary statement(s) Storage**

|           |  |
|-----------|--|
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |
|-----------|--|

**Precautionary statement(s) Disposal**

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

**Label elements**

Relevant risk statements are found in section 2

|                         |        |
|-------------------------|--------|
| Indication(s) of danger | F+, Xn |
|-------------------------|--------|

**SAFETY ADVICE**

|     |  |
|-----|--|
| S02 | Keep out of reach of children.   |
| S09 | Keep container in a well ventilated place.   |
| S13 | Keep away from food, drink and animal feeding stuffs.  |
| S15 | Keep away from heat.   |
| S16 | Keep away from sources of ignition. No smoking.  |
| S23 | Do not breathe gas/fumes/vapour/spray.   |
| S26 | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| S29 | Do not empty into drains.  |
| S33 | Take precautionary measures against static discharges.   |
| S35 | This material and its container must be disposed of in a safe way.   |
| S36 | Wear suitable protective clothing.   |
| S37 | Wear suitable gloves.  |
| S38 | In case of insufficient ventilation, wear suitable respiratory equipment.                                  |
| S38 | In case of insufficient ventilation, wear suitable respiratory equipment.                                  |
| S39 | Wear eye/face protection.  |
| S40 | To clean the floor and all objects contaminated by this material, use water and detergent.                 |
| S41 | In case of fire and/or explosion, DO NOT BREATHE FUMES.  |
| S43 | In case of fire use...   |
| S46 | If swallowed, seek medical advice immediately and show this container or label.                            |

|            |  |
|------------|--|
| <b>S51</b> | Use only in well ventilated areas.   |
| <b>S52</b> | Not recommended for interior use on large surface areas.                                   |
| <b>S56</b> | Dispose of this material and its container at hazardous or special waste collection point. |
| <b>S64</b> | If swallowed, rinse mouth with water (only if the person is conscious).                    |

**Other hazards**

|  |  |
|--|--|
|  | Ingestion may produce health damage*.                            |
|  | Cumulative effects may result following exposure*.               |
|  | May be harmful to the foetus/ embryo*.                           |
|  | May produce discomfort of the respiratory system*.               |
|  | Vapours potentially cause drowsiness and dizziness*.             |
|  | Limited evidence of a carcinogenic effect*.                      |
|  | Repeated exposure potentially causes skin dryness and cracking*. |

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No        | %[weight] | Name   |
|---------------|-----------|--|
| 1330-20-7     | 10-30     | <a href="#">xylene</a>   |
| 67-64-1       | 1-10      | <a href="#">acetone</a>  |
| Not Available | 10-30     | resin  |
| Not Available | 1-30      | pigments   |
| Not Available | 1-10      | filler   |
| 107-98-2      | 1-10      | <a href="#">propylene glycol monomethyl ether - alpha isomer</a> |
| 115-10-6      | 30-60     | <a href="#">dimethyl ether</a>                                   |

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

|                     |   |
|---------------------|---|
| <b>Eye Contact</b>  | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>   |
| <b>Skin Contact</b> | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Remove any adhering solids with industrial skin cleansing cream.</li> <li>▶ <b>DO NOT use solvents.</b></li> <li>▶ Seek medical attention in the event of irritation.</li> </ul>   |
| <b>Inhalation</b>   | <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> <li>▶ Remove to fresh air.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul> |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ Avoid giving milk or oils.</li> <li>▶ Avoid giving alcohol.</li> </ul> <p>Not considered a normal route of entry.</p>  |

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

Treat symptomatically.  
for lower alkyl ethers:

**BASIC TREATMENT**

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

**ADVANCED TREATMENT**

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.

- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension without signs of hypovolaemia may require vasopressors.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

#### EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Ethers may produce anion gap acidosis. Hyperventilation and bicarbonate therapy might be indicated.
- ▶ Haemodialysis might be considered in patients with impaired renal function.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For acute or short term repeated exposures to xylene:

- ▶ Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- ▶ Pulmonary absorption is rapid with about 60-65% retained at rest.
- ▶ Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- ▶ Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> < 50 mm Hg or pCO<sub>2</sub> > 50 mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

#### BIOLOGICAL EXPOSURE INDEX - BEI

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

| Determinant                    | Index                            | Sampling Time                       | Comments |
|--------------------------------|----------------------------------|-------------------------------------|----------|
| Methylhippu-ric acids in urine | 1.5 gm/gm creatinine<br>2 mg/min | End of shift<br>Last 4 hrs of shift |          |

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

|  |   |
|--|---|
|  | <p><b>SMALL FIRE:</b></p> <ul style="list-style-type: none"> <li>▶ Water spray, dry chemical or CO<sub>2</sub></li> </ul> <p><b>LARGE FIRE:</b></p> <ul style="list-style-type: none"> <li>▶ Water spray or fog.</li> </ul> |
|--|---|

### Special hazards arising from the substrate or mixture

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

### Advice for firefighters

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> <li>▶ Severe fire hazard when exposed to heat or flame.</li> <li>▶ Vapour forms an explosive mixture with air.</li> <li>▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li> </ul>                      |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Wear protective clothing, impervious gloves and safety glasses.</li> <li>▶ Shut off all possible sources of ignition and increase ventilation.</li> </ul>                 |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ <b>DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.</b></li> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> </ul> |

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

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

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

## Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ Aerosol dispenser.</li> <li>▶ Check that containers are clearly labelled.</li> </ul> |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>                                      |



- X — Must not be stored together  
 0 — May be stored together with specific preventions  
 + — May be stored together

## PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

| Source                       | Ingredient                                       | Material name                     | TWA                              | STEL                              | Peak          | Notes         |
|------------------------------|--|-----------------------------------|----------------------------------|-----------------------------------|---------------|---------------|
| Australia Exposure Standards | xylene   | Xylene (o-, m-, p- isomers)       | 350 mg/m <sup>3</sup> / 80 ppm   | 655 mg/m <sup>3</sup> / 150 ppm   | Not Available | Not Available |
| Australia Exposure Standards | acetone  | Acetone                           | 1185 mg/m <sup>3</sup> / 500 ppm | 2375 mg/m <sup>3</sup> / 1000 ppm | Not Available | Not Available |
| Australia Exposure Standards | propylene glycol monomethyl ether - alpha isomer | Propylene glycol monomethyl ether | 369 mg/m <sup>3</sup> / 100 ppm  | 553 mg/m <sup>3</sup> / 150 ppm   | Not Available | Not Available |
| Australia Exposure Standards | dimethyl ether                                   | Dimethyl ether                    | 760 mg/m <sup>3</sup> / 400 ppm  | 950 mg/m <sup>3</sup> / 500 ppm   | Not Available | Not Available |

## EMERGENCY LIMITS

| Ingredient                                       | Material name  | TEEL-1        | TEEL-2        | TEEL-3        |
|--|--|---------------|---------------|---------------|
| xylene   | Xylenes  | Not Available | Not Available | Not Available |
| acetone  | Acetone  | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether - alpha isomer | Propylene glycol monomethyl ether; (Ucar Triol HG-170) | 150 ppm       | 150 ppm       | 470 ppm       |
| dimethyl ether                                   | Methyl ether; (Dimethyl ether)                         | 1,000 ppm     | 1000 ppm      | 7200 ppm      |

| Ingredient                                       | Original IDLH | Revised IDLH    |
|--|---------------|-----------------|
| xylene   | 1,000 ppm     | 900 ppm         |
| acetone  | 20,000 ppm    | 2,500 [LEL] ppm |
| resin  | Not Available | Not Available   |
| pigments   | Not Available | Not Available   |
| filler   | Not Available | Not Available   |
| propylene glycol monomethyl ether - alpha isomer | Not Available | Not Available   |
| dimethyl ether                                   | Not Available | Not Available   |

## Exposure controls

|   |  |
|---|--|
| <b>Appropriate engineering controls</b> | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p> |
|---|--|

|                            |  |
|----------------------------|--|
| <b>Personal protection</b> |  |
|----------------------------|--|

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|                                |  |
|--------------------------------|--|
| <b>Eye and face protection</b> | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>                          |
| <b>Skin protection</b>         | See Hand protection below  |
| <b>Hands/feet protection</b>   | <ul style="list-style-type: none"> <li>▶ No special equipment needed when handling small quantities.</li> <li>▶ <b>OTHERWISE:</b></li> <li>▶ For potentially moderate exposures:</li> <li>▶ Wear general protective gloves, eg. light weight rubber gloves.</li> <li>▶ For potentially heavy exposures:</li> <li>▶ Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul> |
| <b>Body protection</b>         | See Other protection below   |
| <b>Other protection</b>        | <p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eyewash unit.</li> </ul>  |
| <b>Thermal hazards</b>         | Not Available  |

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

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

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| Material                                    | CPI    |
|---|--------|
| BUTYL                                       | B      |
| NEOPRENE                                    | B      |
| ##propylene glycol monomethyl ether - alpha | isomer |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

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

## Respiratory protection

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

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

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

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES                       | AX-AUS / Class 1     | -                    | AX-PAPR-AUS / Class 1  |
| up to 25 x ES                      | Air-line*            | AX-2                 | AX-PAPR-2              |
| up to 50 x ES                      | -                    | AX-3                 | -                      |
| 50+ x ES                           | -                    | Air-line**           | -                      |

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

|   |   |  |                |
|---|---|--|----------------|
| <b>Appearance</b>                                   | 28pge Coloured liquid with a characteristic odour; not miscible with water. |  |                |
| <b>Physical state</b>                               | Liquid  | <b>Relative density (Water = 1)</b>            | Not Available  |
| <b>Odour</b>  | Not Available   | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available   | <b>Auto-ignition temperature (°C)</b>          | Not Available  |
| <b>pH (as supplied)</b>                             | Not Available   | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available   | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | Not Available   | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | -41   | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | HIGHLY FLAMMABLE.   | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Available   | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | Not Available   | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Available   | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Immiscible  | <b>pH as a solution</b>                        | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Available   | <b>VOC g/L</b>                                 | Not Available  |

## SECTION 10 STABILITY AND REACTIVITY

|                   |               |
|-------------------|---------------|
| <b>Reactivity</b> | See section 7 |
|-------------------|---------------|

## Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours

|   |  |
|---|--|
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Elevated temperatures.</li> <li>▶ Presence of open flame.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

|                     |  |
|---------------------|--|
| <b>Inhaled</b>      | Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. 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.<br>There is some evidence to suggest that the material can cause respiratory irritation in some persons.  |
| <b>Ingestion</b>    | Accidental ingestion of the material may be damaging to the health of the individual.<br>Not normally a hazard due to physical form of product.<br>Considered an unlikely route of entry in commercial/industrial environments<br>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)<br>Ingestion of alkyl ethers may produce stupor, blurred vision, headache, dizziness and irritation of the nose and throat. |
| <b>Skin Contact</b> | Skin contact with the material may be harmful; systemic effects may result following absorption.<br>The material may accentuate any pre-existing dermatitis condition<br>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.<br>Spray mist may produce discomfort<br>Alkyl ethers may defat and dehydrate the skin producing dermatoses. Absorption may produce headache, dizziness, and central nervous system depression.  |
| <b>Eye</b>          | Not considered to be a risk because of the extreme volatility of the gas. Eye contact with alkyl ethers (vapour or liquid) may produce irritation, redness and tears.<br>There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.   |
| <b>Chronic</b>      | There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.<br>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.<br>There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby.<br>Principal route of occupational exposure to the gas is by inhalation.                               |

|  |   |  |
|--|---|--|
| <b>Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours</b> | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|  | Not Available   | Not Available  |
| <b>xylene</b>  | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|  | Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>  | Eye (human): 200 ppm irritant  |
|  | Inhalation (rat) LC50: 5000 ppm/4h <sup>[2]</sup>   | Eye (rabbit): 5 mg/24h SEVERE  |
|  | Oral (rat) LD50: 4300 mg/kg <sup>[2]</sup>  | Eye (rabbit): 87 mg mild<br>Skin (rabbit):500 mg/24h moderate  |
| <b>acetone</b>   | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|  | Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>  | Eye (human): 500 ppm - irritant  |
|  | Inhalation (rat) LC50: 50.1 mg/L/8 hr <sup>[2]</sup>  | Eye (rabbit): 20mg/24hr -moderate  |
|  | Oral (rat) LD50: 5800 mg/kgE <sup>[2]</sup>   | Eye (rabbit): 3.95 mg - SEVERE<br>Skin (rabbit): 500 mg/24hr - mild<br>Skin (rabbit):395mg (open) - mild |
| <b>propylene glycol monomethyl ether - alpha isomer</b>      | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|  | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>   | Eye (rabbit) 230 mg mild   |
|  | Inhalation (rat) LC50: 10000 ppm/5 h.d <sup>[2]</sup>   | Eye (rabbit) 500 mg/24 h. - mild   |
|  | Oral (rat) LD50: 5207.2 mg/kg <sup>[1]</sup>  | Eye (rabbit): 100 mg SEVERE<br>Skin (rabbit) 500 mg open - mild  |
| <b>dimethyl ether</b>  | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|  | Inhalation (rat) LC50: 309 mg/L/4h <sup>[2]</sup>   | Not Available  |
| <b>Legend:</b>   | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's msds Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |  |

|               |  |
|---------------|--|
| <b>XYLENE</b> | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.<br>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, |
|---------------|--|

## Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours

|  |  |
|--|--|
|  | scaling and thickening of the skin.<br>The substance is classified by IARC as Group 3:<br><b>NOT</b> classifiable as to its carcinogenicity to humans.<br>Reproductive effector in rats  |
| <b>ACETONE</b>   | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.<br>for acetone:<br>The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer but is a defatting agent to the skin. Acetone is an eye irritant.   |
| <b>PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER</b>  | NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Foetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species.   |
| <b>Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours, PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER</b> | for propylene glycol ethers (PGEs):<br>Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).<br>Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on reproductive organs, the developing embryo and fetus, blood (haemolytic effects), or thymus, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces an alkoxyacetic acid. |

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

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

## CMR STATUS

|                   |  |
|-------------------|--|
| <b>REPROTOXIN</b> | xylene ; ILO Chemicals in the electronics industry that have toxic effects on reproduction ; |
|-------------------|--|

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Harmful to aquatic organisms.

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

## Persistence and degradability

| Ingredient                                       | Persistence: Water/Soil     | Persistence: Air                 |
|--|-----------------------------|----------------------------------|
| xylene   | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days)      |
| acetone  | LOW (Half-life = 14 days)   | MEDIUM (Half-life = 116.25 days) |
| propylene glycol monomethyl ether - alpha isomer | LOW (Half-life = 56 days)   | LOW (Half-life = 1.7 days)       |
| dimethyl ether                                   | LOW                         | LOW                              |

## Bioaccumulative potential

| Ingredient                                       | Bioaccumulation    |
|--|--------------------|
| xylene   | MEDIUM (BCF = 740) |
| acetone  | LOW (BCF = 69)     |
| propylene glycol monomethyl ether - alpha isomer | LOW (BCF = 2)      |
| dimethyl ether                                   | LOW (LogKOW = 0.1) |

## Mobility in soil

| Ingredient                                       | Mobility           |
|--|--------------------|
| acetone  | HIGH (KOC = 1.981) |
| propylene glycol monomethyl ether - alpha isomer | HIGH (KOC = 1)     |
| dimethyl ether                                   | HIGH (KOC = 1.292) |

## SECTION 13 DISPOSAL CONSIDERATIONS


## Waste treatment methods



|                                     |  |
|-------------------------------------|--|
| <b>Product / Packaging disposal</b> | <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> |
|-------------------------------------|--|

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

|   |     |
|---|-----|
|  |     |
| <b>Marine Pollutant</b>   | NO  |
| <b>HAZCHEM</b>  | 2YE |

### Land transport (ADG)

|                                     |   |                    |                    |                  |                |
|-------------------------------------|---|--------------------|--------------------|------------------|----------------|
| <b>UN number</b>                    | 1950  |                    |                    |                  |                |
| <b>Packing group</b>                | Not Applicable  |                    |                    |                  |                |
| <b>UN proper shipping name</b>      | AEROSOLS  |                    |                    |                  |                |
| <b>Environmental hazard</b>         | No relevant data  |                    |                    |                  |                |
| <b>Transport hazard class(es)</b>   | <table border="0"> <tr> <td>Class</td> <td>2.1</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>                                  | Class              | 2.1                | Subrisk          | Not Applicable |
| Class                               | 2.1   |                    |                    |                  |                |
| Subrisk                             | Not Applicable  |                    |                    |                  |                |
| <b>Special precautions for user</b> | <table border="0"> <tr> <td>Special provisions</td> <td>63 190 277 327 344</td> </tr> <tr> <td>Limited quantity</td> <td>See SP 277</td> </tr> </table> | Special provisions | 63 190 277 327 344 | Limited quantity | See SP 277     |
| Special provisions                  | 63 190 277 327 344  |                    |                    |                  |                |
| Limited quantity                    | See SP 277  |                    |                    |                  |                |

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

|   |   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
|---|---|--------------------|--------------|---------------------------------|----------------|-------------------------------|--------|--|-----|--|-------|---|------|--|---------|
| <b>UN number</b>  | 1950  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| <b>Packing group</b>                                      | Not Applicable  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| <b>UN proper shipping name</b>                            | Aerosols, flammable   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| <b>Environmental hazard</b>                               | No relevant data  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| <b>Transport hazard class(es)</b>                         | <table border="0"> <tr> <td>ICAO/IATA Class</td> <td>2.1</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>10L</td> </tr> </table>  | ICAO/IATA Class    | 2.1          | ICAO / IATA Subrisk             | Not Applicable | ERG Code                      | 10L    |  |     |  |       |   |      |  |         |
| ICAO/IATA Class   | 2.1   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| ICAO / IATA Subrisk                                       | Not Applicable  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| ERG Code  | 10L   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| <b>Special precautions for user</b>                       | <table border="0"> <tr> <td>Special provisions</td> <td>A145A167A802</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>203</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>150 kg</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>203</td> </tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td> <td>75 kg</td> </tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td> <td>Y203</td> </tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td> <td>30 kg G</td> </tr> </table> | Special provisions | A145A167A802 | Cargo Only Packing Instructions | 203            | Cargo Only Maximum Qty / Pack | 150 kg | Passenger and Cargo Packing Instructions | 203 | Passenger and Cargo Maximum Qty / Pack | 75 kg | Passenger and Cargo Limited Quantity Packing Instructions | Y203 | Passenger and Cargo Limited Maximum Qty / Pack | 30 kg G |
| Special provisions  | A145A167A802  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Cargo Only Packing Instructions                           | 203   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Cargo Only Maximum Qty / Pack                             | 150 kg  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Passenger and Cargo Packing Instructions                  | 203   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Passenger and Cargo Maximum Qty / Pack                    | 75 kg   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Passenger and Cargo Limited Quantity Packing Instructions | Y203  |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |
| Passenger and Cargo Limited Maximum Qty / Pack            | 30 kg G   |                    |              |                                 |                |                               |        |  |     |  |       |   |      |  |         |

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

|                                     |  |            |           |                    |                        |                    |           |
|-------------------------------------|--|------------|-----------|--------------------|------------------------|--------------------|-----------|
| <b>UN number</b>                    | 1950   |            |           |                    |                        |                    |           |
| <b>Packing group</b>                | Not Applicable   |            |           |                    |                        |                    |           |
| <b>UN proper shipping name</b>      | AEROSOLS   |            |           |                    |                        |                    |           |
| <b>Environmental hazard</b>         | Not Applicable   |            |           |                    |                        |                    |           |
| <b>Transport hazard class(es)</b>   | <table border="0"> <tr> <td>IMDG Class</td> <td>2.1</td> </tr> <tr> <td>IMDG Subrisk</td> <td>See SP63</td> </tr> </table>   | IMDG Class | 2.1       | IMDG Subrisk       | See SP63               |                    |           |
| IMDG Class                          | 2.1  |            |           |                    |                        |                    |           |
| IMDG Subrisk                        | See SP63   |            |           |                    |                        |                    |           |
| <b>Special precautions for user</b> | <table border="0"> <tr> <td>EMS Number</td> <td>F-D , S-U</td> </tr> <tr> <td>Special provisions</td> <td>63 190 277 327 344 959</td> </tr> <tr> <td>Limited Quantities</td> <td>See SP277</td> </tr> </table> | EMS Number | F-D , S-U | Special provisions | 63 190 277 327 344 959 | Limited Quantities | See SP277 |
| EMS Number                          | F-D , S-U  |            |           |                    |                        |                    |           |
| Special provisions                  | 63 190 277 327 344 959   |            |           |                    |                        |                    |           |
| Limited Quantities                  | See SP277  |            |           |                    |                        |                    |           |

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

| Source | Ingredient | Pollution Category |
|--------|------------|--------------------|
|--------|------------|--------------------|

## Dy-Mark 230732101 Zinc Guard Epoxy Enamel All Colours

|   |  |   |
|---|--|---|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | xylene   | Y |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | propylene glycol monomethyl ether - alpha isomer | Z |

## SECTION 15 REGULATORY INFORMATION

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

|  |   |
|--|---|
| <b>xylene(1330-20-7) is found on the following regulatory lists</b>  | "Australia Exposure Standards","International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists" |
| <b>acetone(67-64-1) is found on the following regulatory lists</b>   | "Australia Exposure Standards","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"   |
| <b>propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists</b> | "Australia Exposure Standards","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"   |
| <b>dimethyl ether(115-10-6) is found on the following regulatory lists</b>                                   | "Australia Exposure Standards","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"   |

## SECTION 16 OTHER INFORMATION

## Other information

## Ingredients with multiple cas numbers

| Name           | CAS No                |
|----------------|-----------------------|
| dimethyl ether | 115-10-6, 157621-61-9 |

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

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

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

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

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