



# Dy-Mark 40011229 Spray & Mark Fluorescent All Colours

Dy-Mark

Chemwatch Hazard Alert Code: 4

Chemwatch: 18-3983

Version No: 8.1.1.1

Material Safety Data Sheet according to NOHSC and ADG requirements

Issue Date: 09/12/2014

Print Date: 15/01/2015

Initial Date: Not Available

S.Local.AUS.EN

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

### Product Identifier

|                               |  |
|-------------------------------|--|
| Product name                  | Dy-Mark 40011229 Spray & Mark Fluorescent All Colours  |
| Chemical Name                 | Not Applicable   |
| Synonyms                      | 40011229 F/Pink Trade Pack, 40013522 Toluene Free, 40013528 Fluro Violet, 40033522 F/Red 350g 360o, 40033523 F/Blue 350g 360o, 40033524 F/Green 350g 360o, 40033526 F/Orange 360d, 40033529 F/Pink 350g 360o |
| Proper shipping name          | AEROSOLS   |
| Chemical formula              | Not Applicable   |
| Other means of identification | Not Available  |
| CAS number                    | Not Applicable   |

### 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>Use according to manufacturer's directions. |
|--------------------------|--|

### 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 | +61 403 186 708 |

## 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 <sup>[1]</sup>       | <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>R66</td><td>Repeated exposure may cause skin dryness and cracking.</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>R67</td><td>Vapours may cause drowsiness and dizziness.</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. | R66 | Repeated exposure may cause skin dryness and cracking. | R52 | Harmful to aquatic organisms. | R44 | Risk of explosion if heated under confinement. | R67 | Vapours may cause drowsiness and dizziness. | R12 | Extremely flammable. |
| R20/21                            | Harmful by inhalation and in contact with skin.  |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| R36/38                            | Irritating to eyes and skin.   |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| R66                               | Repeated exposure may cause skin dryness and cracking.   |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| R52                               | Harmful to aquatic organisms.  |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| R44                               | Risk of explosion if heated under confinement.   |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| R67                               | Vapours may cause drowsiness and dizziness.  |        |   |        |                              |     |  |     |                               |     |  |     |   |     |                      |
| 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 <sup>[1]</sup> | Flammable Aerosol Category 1, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, STOT - SE (Narcosis) Category 3, 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

Continued...

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

|             |               |
|-------------|---------------|
| 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                         |
| H336   | May cause drowsiness or dizziness                     |
| H402   | Harmful to aquatic life                               |
| AUH044 | Risk of explosion if heated under confinement         |
| AUH066 | Repeated exposure may cause skin dryness and cracking |

**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**

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

**Precautionary statement(s) Disposal**

|      |  |
|------|--|
| P501 | Dispose of contents/container 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**

|     |  |
|-----|--|
| S07 | Keep container tightly closed.   |
| 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.   |
| S25 | Avoid contact with eyes.   |
| 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.   |

Continued...

## Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours

|     |  |
|-----|--|
| S37 | Wear suitable gloves.  |
| 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.            |
| S51 | Use only in well ventilated areas.   |
| S56 | Dispose of this material and its container at hazardous or special waste collection point. |
| S57 | Use appropriate container to avoid environmental contamination.                            |
| S64 | If swallowed, rinse mouth with water (only if the person is conscious).                    |

## Other hazards

|  |  |
|--|--|
|  | Limited evidence of a carcinogenic effect*.        |
|  | Ingestion may produce health damage*.              |
|  | Cumulative effects may result following exposure*. |
|  | May produce discomfort of the respiratory system*. |
|  | May be harmful to the foetus/ embryo*.             |

## 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       | 10-30     | <a href="#">acetone</a>  |
| Not Available | 1-10      | pigment and filler, non-hazardous  |
| Not Available | 1-10      | resin, non-hazardous   |
| 115-10-6      | 10-30     | <a href="#">dimethyl ether</a>   |
| 68476-85-7.   | 10-30     | <a href="#">hydrocarbon propellant</a>   |
|               |           | The hydrocarbon propellant used in the product contains less than 0.1% w/w 1,3 butadiene |
|               |           | therefore product not classified as a carcinogen   |

*The hydrocarbon propellant used in the product contains less than 0.1% w/w 1,3 butadiene therefore product not classified as a carcinogen*

## 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.

Continued...

- ▶ 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 acetone:

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

Management:

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

Inhalation Management:

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

Dermal Management:

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

Eye Management:

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

Oral Management:

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

Systemic Management:

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

The Chemical Incident Management Handbook:

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

BIOLOGICAL EXPOSURE INDEX

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

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

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

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

#### SMALL FIRE:

- ▶ Water spray, dry chemical or CO<sub>2</sub>

#### LARGE FIRE:

- ▶ Water spray or fog.

**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>▶ Remove leaking cylinders to a safe place if possible.</li> <li>▶ Release pressure under safe, controlled conditions by opening the valve.</li> <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> </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>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul>   |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ 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> | ▶ Avoid reaction with oxidising agents  |



X — Must not be stored together

O — 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/m3 / 80 ppm    | 655 mg/m3 / 150 ppm   | Not Available | Not Available |
| Australia Exposure Standards | acetone                | Acetone                       | 1185 mg/m3 / 500 ppm  | 2375 mg/m3 / 1000 ppm | Not Available | Not Available |
| Australia Exposure Standards | dimethyl ether         | Dimethyl ether                | 760 mg/m3 / 400 ppm   | 950 mg/m3 / 500 ppm   | Not Available | Not Available |
| Australia Exposure Standards | hydrocarbon propellant | LPG (liquified petroleum gas) | 1800 mg/m3 / 1000 ppm | Not Available         | 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 |

## Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours

|                        |                                   |           |          |           |
|------------------------|-----------------------------------|-----------|----------|-----------|
| dimethyl ether         | Methyl ether; (Dimethyl ether)    | 1,000 ppm | 1000 ppm | 7200 ppm  |
| hydrocarbon propellant | Liquified petroleum gas; (L.P.G.) | 3,000 ppm | 3200 ppm | 19000 ppm |

| Ingredient                        | Original IDLH    | Revised IDLH    |
|-----------------------------------|------------------|-----------------|
| xylene                            | 1,000 ppm        | 900 ppm         |
| acetone                           | 20,000 ppm       | 2,500 [LEL] ppm |
| pigment and filler, non-hazardous | Not Available    | Not Available   |
| resin, non-hazardous              | Not Available    | Not Available   |
| dimethyl ether                    | Not Available    | Not Available   |
| hydrocarbon propellant            | 19,000 [LEL] ppm | 2,000 [LEL] ppm |

## 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>              |   |
| <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:

Dy-Mark 40011229 Spray & Mark Fluorescent All Colours

| Material          | CPI |
|-------------------|-----|
| 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/EVAL/PE        | C   |
| PVA               | C   |
| PVC               | C   |
| PVDC/PE/PVDC      | C   |
| SARANEX-23        | C   |
| SARANEX-23 2-PLY  | C   |
| TEFLON            | C   |

## Respiratory protection

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

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

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

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | Air-line*            | AX-2                 | AX-PAPR-2 ^            |
| up to 20 x ES                      | -                    | AX-3                 | -                      |
| 20+ 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)

|                |       |
|----------------|-------|
| VITON          | C     |
| VITON/NEOPRENE | C     |
| ##dimethyl     | ether |

\* 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

|   |   |  |                |
|---|---|--|----------------|
| <b>Appearance</b>                                   | 22aer Flammable coloured liquid; partially 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 Applicable  | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available   | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | Not Available   | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | -81 (propellant)  | <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>                    | Partly Miscible   | <b>pH as a solution(1%)</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  |
| <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. 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. Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments. Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Not a likely route of entry into the body in commercial or industrial environments. |
| <b>Skin Contact</b> | Skin contact with the material may be harmful; systemic effects may result following absorption. The material may accentuate any pre-existing dermatitis condition. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Spray mist may produce discomfort. Alkyl ethers may defat and dehydrate the skin producing dermatoses. Absorption may produce headache, dizziness, and central nervous system depression.  |

## Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours

|                |   |
|----------------|---|
| <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. 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> | Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.<br>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. |

| Dy-Mark 40011229 Spray & Mark Fluorescent All Colours | TOXICITY   | IRRITATION                        |
|---|--|-----------------------------------|
|   |  | Not Available                     |
| xylene  | TOXICITY   | IRRITATION                        |
|   | Inhalation (rat) LC50: 5000 ppm/4h                   | Eye (human): 200 ppm irritant     |
|   | Intraperitoneal (Mouse) LD50: 1548 mg/kg             | Eye (rabbit): 5 mg/24h SEVERE     |
|   | Intraperitoneal (Rat) LD50: 2459 mg/kg               | Eye (rabbit): 87 mg mild          |
|   | Oral (Mouse) LD50: 2119 mg/kg                        | Skin (rabbit):500 mg/24h moderate |
|   | Oral (rat) LD50: 4300 mg/kg                          |                                   |
|   | Subcutaneous (Rat) LD50: 1700 mg/kg                  |                                   |
|   | Not Available  | Not Available                     |
| acetone   | TOXICITY   | IRRITATION                        |
|   | Dermal (rabbit) LD50: 20000 mg/kg                    | Eye (human): 500 ppm - irritant   |
|   | Inhalation (rat) LC50: 50100 mg/m <sup>3</sup> /8 hr | Eye (rabbit): 20mg/24hr -moderate |
|   | Oral (rat) LD50: 5800 mg/kg                          | Eye (rabbit): 3.95 mg - SEVERE    |
|   |  | Skin (rabbit): 500 mg/24hr - mild |
|   | Skin (rabbit):395mg (open) - mild                    |                                   |
|   | Not Available  | Not Available                     |
| dimethyl ether  | TOXICITY   | IRRITATION                        |
|   | Inhalation (rat) LC50: 308000 mg/m <sup>3</sup>      |                                   |
|   | Not Available  | Not Available                     |
| hydrocarbon propellant                                | TOXICITY   | IRRITATION                        |
|   | Not Available  | Not Available                     |

\* Value obtained from manufacturer's msds  
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

|  |  |
|--|--|
| <b>Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours</b> | for acetone:<br>The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin. Acetone is an eye irritant. The subchronic toxicity of acetone has been examined in mice and rats that were administered acetone in the drinking water and again in rats treated by oral gavage.  |
| <b>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, 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 sensitiser but is a defatting agent to the skin. Acetone is an eye irritant.   |
| <b>HYDROCARBON PROPELLANT</b>                                    | No significant acute toxicological data identified in literature search.<br>inhalation of the gas  |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <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>        | ⊖ |

Continued...



## Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours

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

|            |        |   |
|------------|--------|---|
| REPROTOXIN | xylene | ILO Chemicals in the electronics industry that have toxic effects on reproduction |
|------------|--------|---|

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Harmful to aquatic organisms.  
**DO NOT** discharge into sewer or waterways.

## 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) |
| dimethyl ether | LOW                         | LOW                              |

## Bioaccumulative potential

| Ingredient     | Bioaccumulation    |
|----------------|--------------------|
| xylene         | MEDIUM (BCF = 740) |
| acetone        | LOW (BCF = 69)     |
| dimethyl ether | LOW (LogKOW = 0.1) |

## Mobility in soil

| Ingredient     | Mobility           |
|----------------|--------------------|
| acetone        | HIGH (KOC = 1.981) |
| dimethyl ether | HIGH (KOC = 1.292) |

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

|                              |  |
|------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains.</li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> </ul> |
|------------------------------|--|

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

|                  |   |
|------------------|---|
|                  |  |
| Marine Pollutant | NO  |
| HAZCHEM          | 2YE   |

## Land transport (ADG)

|                              |  |
|------------------------------|--|
| UN number                    | 1950   |
| Packing group                | Not Applicable   |
| UN proper shipping name      | AEROSOLS   |
| Environmental hazard         | No relevant data   |
| Transport hazard class(es)   | Class : 2.1<br>Subrisk : Not Applicable                                  |
| Special precautions for user | Special provisions : 63 190 277 327 344<br>Limited quantity : See SP 277 |

## Air transport (ICAO-IATA / DGR)

|                         |                     |
|-------------------------|---------------------|
| UN number               | 1950                |
| Packing group           | Not Applicable      |
| UN proper shipping name | Aerosols, flammable |
| Environmental hazard    | No relevant data    |

## Dy-Mark 40011229 Spray &amp; Mark Fluorescent All Colours

|                              |   |                |
|------------------------------|---|----------------|
| Transport hazard class(es)   | ICAO/IATA Class   | 2.1            |
|                              | ICAO / IATA Subrisk                                       | Not Applicable |
|                              | ERG Code  | 10L            |
| Special precautions for user | 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)

|                              |                    |                        |
|------------------------------|--------------------|------------------------|
| UN number                    | 1950               |                        |
| Packing group                | Not Applicable     |                        |
| UN proper shipping name      | AEROSOLS           |                        |
| Environmental hazard         | No relevant data   |                        |
| Transport hazard class(es)   | IMDG Class         | 2.1                    |
|                              | IMDG Subrisk       | See SP63               |
| Special precautions for user | 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 |
|---|------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | xylene     | Y                  |

## SECTION 15 REGULATORY INFORMATION

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

|  |  |
|--|--|
| xylene(1330-20-7) is found on the following regulatory lists                   | "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" |
| acetone(67-64-1) is found on the following regulatory lists                    | "Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"  |
| dimethyl ether(115-10-6) is found on the following regulatory lists            | "Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"  |
| hydrocarbon propellant(68476-85-7.) is found on the following regulatory lists | "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    |
| hydrocarbon propellant | 68476-85-7., 68476-86-8. |

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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