

# SAFETY DATA SHEET



SP2198 MS Hardener Medium

## Section 1. Identification

**Product name** : SP2198 MS Hardener Medium

**Product type** : Liquid.

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

### Identified uses

Use in coatings - Hardener.

### Supplier

**Manufacturer** : Valspar b.v.  
Zuiveringweg 89  
8243 PE Lelystad  
The Netherlands  
tel: +31 (0)320 292200  
fax: +31 (0)320 292201

**Emergency telephone number** : Call: +31 (0)320 292200 (during daytime)

**Supplier's details** : DBNZ Coatings Limited  
6 Killarney Lane  
Hamilton 3243  
NEW ZEALAND  
T: +64 7847 0933  
F: +64 7847 0932  
E: info@dbnz.co.nz

**Emergency telephone number (with hours of operation)** : New Zealand Poisons Information Centre: 0800 764766 (24 hrs)

**e-mail address of person responsible for this SDS** : info.nl@valspar.com

## Section 2. Hazards identification

**HSNO Classification** : 3.1 - FLAMMABLE LIQUIDS - Category C  
6.3 - SKIN IRRITATION - Category B  
6.4 - EYE IRRITATION - Category A (Irritant)  
6.5 - SENSITIZATION - Category A (Respiratory)  
6.5 - SENSITIZATION - Category B (Skin)  
6.7 - CARCINOGENICITY - Category B  
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B  
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B  
6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B  
9.1 - AQUATIC ECOTOXICITY - Category C

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

### GHS label elements

**Signal word** : Danger

## Section 2. Hazards identification

**Hazard statements** : Flammable liquid and vapour.  
Causes mild skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs.  
Harmful to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye/face protection. Wear appropriate respiratory protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Do not breathe vapour or spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

**Response** : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Storage** : Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Symbol** :



**Other hazards which do not result in classification** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name                          | % (w/w)   | CAS number |
|--|-----------|------------|
| 2-methoxy-1-methylethyl acetate          | 25 - 50   | 108-65-6   |
| Aliphatic polyisocyanate.                | 25 - 50   | 28182-81-2 |
| n-butyl acetate                          | 12.5 - 25 | 123-86-4   |
| Aliphatic polyisocyanate 2.              | 5 - 12.5  | 53880-05-0 |
| xylene                                   | 5 - 12.5  | 1330-20-7  |
| Solvent naphtha (petroleum), light arom. | 1 - 5     | 64742-95-6 |
| 1,2,4-trimethylbenzene                   | 1 - 5     | 95-63-6    |
| ethylbenzene                             | 1 - 5     | 100-41-4   |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

#### Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Eyes** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : Not available.

## Section 4. First aid measures

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides
- Hazchem code** : 3Y
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Methods and material for containment and cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

## Section 6. Accidental release measures

Contaminated absorbent material may pose the same hazard as the spilt product.  
Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name                 | Exposure limits   |
|---------------------------------|---|
| 2-methoxy-1-methylethyl acetate | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b><br>STEL: 548 mg/m <sup>3</sup> 15 minutes.<br>TWA: 50 ppm 8 hours.<br>TWA: 274 mg/m <sup>3</sup> 8 hours.<br>STEL: 100 ppm 15 minutes. |
| Aliphatic polyisocyanate.       | <b>NZ HSWA (New Zealand, 6/2016). Skin sensitiser.</b><br>WES-TWA: 0.02 mg/m <sup>3</sup> , (measured as -NCO) 8 hours.<br>WES-STEL: 0.07 mg/m <sup>3</sup> , (measured as -NCO) 15 minutes.                        |
| n-butyl acetate                 | <b>NZ HSWA (New Zealand, 6/2016).</b><br>WES-TWA: 150 ppm 8 hours.<br>WES-TWA: 713 mg/m <sup>3</sup> 8 hours.<br>WES-STEL: 950 mg/m <sup>3</sup> 15 minutes.<br>WES-STEL: 200 ppm 15 minutes.                       |
| xylene                          | <b>NZ HSWA (New Zealand, 6/2016). Notes: See Notice of Intended Changes.</b><br>WES-TWA: 217 mg/m <sup>3</sup> , 0 times per shift, 8 hours.<br>WES-TWA: 50 ppm, 0 times per shift, 8                               |

## Section 8. Exposure controls/personal protection

1,2,4-trimethylbenzene

ethylbenzene

hours.

**ACGIH TLV (United States, 3/2016).**TWA: 123 mg/m<sup>3</sup> 8 hours.

TWA: 25 ppm 8 hours.

**NZ HSWA (New Zealand, 6/2016).**WES-STEL: 543 mg/m<sup>3</sup> 15 minutes.

WES-STEL: 125 ppm 15 minutes.

WES-TWA: 434 mg/m<sup>3</sup> 8 hours.

WES-TWA: 100 ppm 8 hours.

### Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Respiratory protection

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: full-face mask supplied-air respirator.

#### Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Recommended EN 374 butyl rubber polyvinyl alcohol (PVA) Viton® ≥ 0.7 mm  
4 - 8 hours (breakthrough time): Recommended EN 374 neoprene ≥ 0.7 mm  
< 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR (≥ 0.35 mm). Only suitable as splash protection. Only suitable for brief exposure. In the event of contamination, change protective gloves immediately.

#### Eye protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: If inhalation hazards exist, a full-face respirator may be required instead.

#### Skin protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.



## Section 9. Physical and chemical properties

### Appearance

|  |   |
|--|---|
| Physical state                               | : Liquid.   |
| Colour                                       | : Clear.  |
| Odour  | : Not available.  |
| Odour threshold                              | : Not available.  |
| pH   | : Not available.  |
| Melting point                                | : Not available.  |
| Boiling point                                | : >100°C (>212°F)   |
| Flash point                                  | : Closed cup: 35°C (95°F)   |
| Evaporation rate                             | : Not available.  |
| Flammability (solid, gas)                    | : Not available.  |
| Lower and upper explosive (flammable) limits | : Lower: 1.2%<br>Upper: 10.8%                                     |
| Vapour pressure                              | : Not available.  |
| Vapour density                               | : 4.3 [Air = 1]   |
| Relative density                             | : 1.005   |
| Solubility                                   | : Insoluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water       | : Not available.  |
| Auto-ignition temperature                    | : Not available.  |
| Decomposition temperature                    | : Not available.  |
| Viscosity                                    | : Kinematic (40°C (104°F)): 0.04 cm <sup>2</sup> /s (4 cSt)       |

### Aerosol product

|  |                   |
|--|-------------------|
| Type of aerosol                                | : Not applicable. |
| Heat of combustion                             | : Not available.  |
| Ignition distance                              | : Not applicable. |
| Enclosed space ignition - Time equivalent      | : Not applicable. |
| Enclosed space ignition - Deflagration density | : Not applicable. |
| Flame height                                   | : Not applicable. |
| Flame duration                                 | : Not applicable. |

## Section 10. Stability and reactivity

|                                    |   |
|------------------------------------|---|
| Chemical stability                 | : The product is stable.  |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.   |
| Conditions to avoid                | : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas. |
| Incompatible materials             | : Reactive or incompatible with the following materials:<br>oxidizing materials   |
| Hazardous decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

## Section 11. Toxicological information

### Information on likely routes of exposure

- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

### Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Acute toxicity

| Product/ingredient name                  | Result                          | Species               | Dose         | Exposure |
|--|---------------------------------|-----------------------|--------------|----------|
| 2-methoxy-1-methylethyl acetate          | LD50 Dermal                     | Rat                   | >5000 mg/kg  | -        |
| Aliphatic polyisocyanate.                | LD50 Oral                       | Rat - Female          | >5000 mg/kg  | -        |
|  | LC50 Inhalation Dusts and mists | Rat                   | 2.18 mg/l    | 4 hours  |
|  | LD50 Dermal                     | Rabbit - Male, Female | >2000 mg/kg  | -        |
|  | LD50 Dermal                     | Rat - Male, Female    | >2000 mg/kg  | -        |
| n-butyl acetate                          | LD50 Oral                       | Rat                   | >5000 mg/kg  | -        |
|  | LC50 Inhalation Vapour          | Rat                   | >21.1 mg/l   | 4 hours  |
|  | LD50 Dermal                     | Rabbit                | >14112 mg/kg | -        |
| Aliphatic polyisocyanate 2.              | LD50 Oral                       | Rat                   | 10760 mg/kg  | -        |
|  | LC50 Inhalation Dusts and mists | Rat                   | >5 mg/l      | 4 hours  |
| xylene                                   | LD50 Oral                       | Rat                   | >14000 mg/kg | -        |
|  | LC50 Inhalation Vapour          | Rat                   | 27.6 mg/l    | 4 hours  |
|  | LD50 Dermal                     | Rabbit                | >2000 mg/kg  | -        |
| Solvent naphtha (petroleum), light arom. | LD50 Oral                       | Rat                   | >2000 mg/kg  | -        |
|  | LC50 Inhalation Vapour          | Rat                   | >6193 mg/l   | 4 hours  |
|  | LD50 Dermal                     | Rabbit                | >3160 mg/kg  | -        |
| 1,2,4-trimethylbenzene ethylbenzene      | LD50 Oral                       | Rat                   | 3492 mg/kg   | -        |
|  | LD50 Oral                       | Rat                   | >5000 mg/kg  | -        |
|  | LC50 Inhalation Vapour          | Rat                   | >9.6 mg/l    | 4 hours  |
|  | LD50 Dermal                     | Rabbit                | >15000 mg/kg | -        |
|  | LD50 Oral                       | Rat                   | >3500 mg/kg  | -        |

#### Irritation/Corrosion



## Section 11. Toxicological information

| Product/ingredient name             | Result                   | Species | Score | Exposure                | Observation |
|-------------------------------------|--------------------------|---------|-------|-------------------------|-------------|
| Aliphatic polyisocyanate.<br>xylene | Skin - Mild irritant     | Rabbit  | -     | 4 hours                 | -           |
|                                     | Eyes - Mild irritant     | Rabbit  | -     | -                       | -           |
|                                     | Skin - Mild irritant     | Rat     | -     | 8 hours 60 microliters  | -           |
| ethylbenzene                        | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 milligrams | -           |
|                                     | Skin - Moderate irritant | Rabbit  | -     | 100 Percent             | -           |
|                                     | Eyes - Mild irritant     | Rabbit  | -     | 87 milligrams           | -           |
|                                     | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 5 milligrams   | -           |
|                                     | Eyes - Severe irritant   | Rabbit  | -     | 500 milligrams          | -           |
|                                     | Skin - Mild irritant     | Rabbit  | -     | 24 hours 15 milligrams  | -           |

### Sensitisation

| Product/ingredient name   | Route of exposure | Species    | Result      |
|---------------------------|-------------------|------------|-------------|
| Aliphatic polyisocyanate. | skin              | Mouse      | Sensitising |
|                           | skin              | Guinea pig | Sensitising |

### Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Inhalation** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Eye contact** : No known significant effects or critical hazards.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

### Chronic toxicity

| Product/ingredient name   | Result  | Species               | Dose                  | Exposure                 |
|---------------------------|---|-----------------------|-----------------------|--------------------------|
| Aliphatic polyisocyanate. | Sub-chronic NOAEL<br>Inhalation Dusts and mists | Rat - Male,<br>Female | 3.3 mg/m <sup>3</sup> | 90 days; 6 hours per day |

### Carcinogenicity

Not available.

### Mutagenicity

| Product/ingredient name   | Test  | Experiment   | Result   |
|---------------------------|---|--|----------|
| Aliphatic polyisocyanate. | OECD 471 Bacterial Reverse Mutation Test            | Experiment: In vitro<br>Subject: Bacteria<br>Metabolic activation: +/-         | Negative |
|                           | OECD 476 In vitro Mammalian Cell Gene Mutation Test | Experiment: In vitro<br>Subject: Mammalian-Animal<br>Metabolic activation: +/- | Negative |

### Teratogenicity

Not available.

### Reproductive toxicity

## Section 11. Toxicological information

Not available.

### Specific target organ toxicity

| Name                   | Category   | Route of exposure  | Target organs                    |
|------------------------|------------|--------------------|----------------------------------|
| xylene                 | Category B | Oral<br>Inhalation | Not determined<br>Not determined |
| 1,2,4-trimethylbenzene | Category B | Inhalation         | Not determined                   |
| ethylbenzene           | Category B | Inhalation         | Not determined                   |

### Aspiration hazard

| Name                                     |
|--|
| Solvent naphtha (petroleum), light arom. |

### Numerical measures of toxicity

#### Acute toxicity estimates

| Route                        | ATE value     |
|------------------------------|---------------|
| Oral                         | 5132.9 mg/kg  |
| Dermal                       | 17405.1 mg/kg |
| Inhalation (vapours)         | 64.31 mg/l    |
| Inhalation (dusts and mists) | 7.314 mg/l    |

## Section 12. Ecological information

**Ecotoxicity** : This material is harmful to aquatic life with long lasting effects.

### Aquatic and terrestrial toxicity

| Product/ingredient name                  | Result                  | Species                                 | Exposure |
|--|-------------------------|---|----------|
| 2-methoxy-1-methylethyl acetate          | Acute EC50 >1000 mg/l   | Algae - Pseudokirchnerella subcapitata  | 96 hours |
| Aliphatic polyisocyanate.                | Acute EC50 408 mg/l     | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 134 mg/l     | Fish - Oncorhynchus mykiss              | 96 hours |
| n-butyl acetate                          | Acute EC50 >1000 mg/l   | Algae - Scenedesmus subspicatus         | 72 hours |
|  | Acute EC50 >100 mg/l    | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 >100 mg/l    | Fish - Danio rerio                      | 96 hours |
|  | Acute EC50 397 mg/l     | Algae - Selenastrum capricornutum       | 72 hours |
| Aliphatic polyisocyanate 2.              | Acute EC50 44 mg/l      | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 32 mg/l      | Crustaceans - Artemia salina            | 48 hours |
|  | Acute LC50 18 mg/l      | Fish - Pimephales promelas              | 96 hours |
|  | Acute NOEC 200 mg/l     | Algae                                   | 72 hours |
|  | Acute EC50 >100 mg/l    | Daphnia                                 | 48 hours |
| xylene                                   | Acute EC50 >100 mg/l    | Fish                                    | 96 hours |
|  | Acute EC50 1 to 10 mg/l | Algae                                   | 72 hours |
|  | Acute EC50 1 to 10 mg/l | Daphnia - Daphnia magna                 | 48 hours |
| Solvent naphtha (petroleum), light arom. | Acute LC50 1 to 10 mg/l | Fish                                    | 96 hours |
|  | Acute EC50 2.9 mg/l     | Algae - Pseudokirchneriella subcapitata | 72 hours |
|  | Acute EC50 3.2 mg/l     | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 9.2 mg/l     | Fish - Oncorhynchus mykiss              | 96 hours |
| 1,2,4-trimethylbenzene ethylbenzene      | Acute NOEC >1 mg/l      | Algae - Pseudokirchneriella subcapitata | 72 hours |
|  | Acute EC50 1 to 10 mg/l | Fish                                    | 96 hours |
|  | Acute EC50 >1.8 mg/l    | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 >10 mg/l     | Fish - Pimephales promelas              | 96 hours |

### Persistence/degradability

## Section 12. Ecological information

| Product/ingredient name                     | Test   | Result                      | Dose | Inoculum    |
|---|--|-----------------------------|------|-------------|
| 2-methoxy-1-methylethyl acetate             | OECD 302B<br>Inherent<br>Biodegradability:<br>Zahn-Wellens/<br>EMPA Test       | 100 % - 28 days             | -    | -           |
|   | OECD 301F<br>Ready<br>Biodegradability -<br>Manometric<br>Respirometry<br>Test | 83 % - 28 days              | -    | -           |
| Aliphatic polyisocyanate.                   | EU 67/548/EEC<br>ANNEX V, C.4.E.   | 1 % - Not readily - 28 days | -    | -           |
| n-butyl acetate                             | OECD 301D<br>Ready<br>Biodegradability -<br>Closed Bottle<br>Test              | >80 % - 5 days              | -    | -           |
| Aliphatic polyisocyanate 2.                 | OECD 302C<br>Inherent<br>Biodegradability:<br>Modified MITI<br>Test (II)       | 5 % - 28 days               | -    | -           |
|   | OECD 301F<br>Ready<br>Biodegradability -<br>Manometric<br>Respirometry<br>Test | 1 % - 28 days               | -    | -           |
| Solvent naphtha (petroleum),<br>light arom. | -  | 78 % - Readily - 28 days    | -    | Fresh water |

| Product/ingredient name                     | Aquatic half-life          | Photolysis | Biodegradability |
|---|----------------------------|------------|------------------|
| 2-methoxy-1-methylethyl acetate             | -                          | -          | Readily          |
| Aliphatic polyisocyanate.                   | Fresh water 7.7 days, 23°C | -          | Not readily      |
| n-butyl acetate                             | -                          | -          | Readily          |
| Aliphatic polyisocyanate 2.                 | -                          | -          | Not readily      |
| Solvent naphtha (petroleum),<br>light arom. | -                          | -          | Readily          |

### Bioaccumulative potential

| Product/ingredient name         | LogP <sub>ow</sub> | BCF         | Potential |
|---------------------------------|--------------------|-------------|-----------|
| 2-methoxy-1-methylethyl acetate | 1.2                | -           | low       |
| Aliphatic polyisocyanate.       | 5.54               | 367.7       | low       |
| n-butyl acetate                 | 2.3                | -           | low       |
| xylene                          | 3.12               | 8.1 to 25.9 | low       |
| 1,2,4-trimethylbenzene          | 3.63               | 243         | low       |
| ethylbenzene                    | 3.6                | -           | low       |

### Mobility in soil





**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.



## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

| Regulatory information   | UN number | Proper shipping name   | Classes | PG* | Label   | Additional information  |
|--------------------------|-----------|------------------------|---------|-----|---|---|
| <b>New Zealand Class</b> | UN1263    | PAINT RELATED MATERIAL | 3       | III |    | <b>Hazchem code</b><br>3Y<br><br><b>Special provisions</b><br>163, 223  |
| <b>ADG Class</b>         | UN1263    | PAINT RELATED MATERIAL | 3       | III |  | <b>Hazchem code</b><br>•3Y<br><br><b>Special provisions</b><br>163, 223   |
| <b>UN Class</b>          | UN1263    | PAINT RELATED MATERIAL | 3       | III |  | <b>Special provisions</b><br>163, 223   |
| <b>ADR/RID Class</b>     | UN1263    | PAINT RELATED MATERIAL | 3       | III |  | <b>Hazard identification number</b><br>30<br><br><b>Limited quantity</b><br>5 L<br><br><b>Special provisions</b><br>163, 640E, 650<br><br><b>Tunnel code</b><br>(D/E) |
|                          |           |                        |         |     |   |   |

## Section 14. Transport information

|                   |        |                        |   |     |   |   |
|-------------------|--------|------------------------|---|-----|---|---|
| <b>IATA Class</b> | UN1263 | Paint related material | 3 | III |  | <b><u>Passenger and Cargo Aircraft</u></b><br>Quantity limitation: 60 L<br>Packaging instructions: 355<br><b><u>Cargo Aircraft Only</u></b><br>Quantity limitation: 220 L<br>Packaging instructions: 366<br><b><u>Limited Quantities - Passenger Aircraft</u></b><br>Quantity limitation: 10 L<br>Packaging instructions: Y344<br><br><b><u>Special provisions</u></b><br>A3, A72 |
| <b>IMDG Class</b> | UN1263 | PAINT RELATED MATERIAL | 3 | III |  | <b><u>Emergency schedules (EmS)</u></b><br>F-E, _S-E_<br><br><b><u>Special provisions</u></b><br>163, 223, 955  |

PG\* : Packing group

## Section 15. Regulatory information

**New Zealand Inventory of Chemicals (NZIoC)** : All components are listed or exempted.

**HSNO Approval Number** : HSR002669

**HSNO Group Standard** : Surface Coatings and Colourants

**HSNO Classification** :

- 3.1 - FLAMMABLE LIQUIDS - Category C
- 6.3 - SKIN IRRITATION - Category B
- 6.4 - EYE IRRITATION - Category A (Irritant)
- 6.5 - SENSITIZATION - Category A (Respiratory)
- 6.5 - SENSITIZATION - Category B (Skin)
- 6.7 - CARCINOGENICITY - Category B
- 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B
- 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B
- 6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B
- 9.1 - AQUATIC ECOTOXICITY - Category C

**Australia inventory (AICS)** : All components are listed or exempted.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

## Section 15. Regulatory information

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

|                          |  |
|--------------------------|--|
| <b>Australia</b>         | : All components are listed or exempted.   |
| <b>Canada</b>            | : All components are listed or exempted.   |
| <b>China</b>             | : All components are listed or exempted.   |
| <b>Europe</b>            | : All components are listed or exempted.   |
| <b>Japan</b>             | : <b>Japan inventory (ENCS)</b> : Not determined.<br><b>Japan inventory (ISHL)</b> : Not determined. |
| <b>Malaysia</b>          | : Not determined.  |
| <b>Philippines</b>       | : All components are listed or exempted.   |
| <b>Republic of Korea</b> | : All components are listed or exempted.   |
| <b>Taiwan</b>            | : All components are listed or exempted.   |
| <b>Turkey</b>            | : All components are listed or exempted.   |
| <b>United States</b>     | : All components are listed or exempted.   |

## Section 16. Other information

### History

**Date of printing** : 22/09/2017

**Date of issue/Date of revision** : 22/09/2017

**Date of previous issue** : 06/06/2017

**Version** : 1

|                             |   |
|-----------------------------|---|
| <b>Key to abbreviations</b> | : ADG = Australian Dangerous Goods<br>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road<br>ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Intermediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail<br>UN = United Nations |
|-----------------------------|---|

**References** : Not available.

📌 Indicates information that has changed from previously issued version.

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