



## Safety Data Sheet

prepared to UN GHS Revision 3

### 1. Identification of the Substance/Mixture and the Company/Undertaking

|  |  |                         |            |
|--|--|-------------------------|------------|
| <b>1.1 Product Identifier</b>  | F01-103-FSLR-B-BLNK-3.952  | <b>Revision Date:</b>   | 09/11/2020 |
| <b>Product Name:</b>   | Flowfresh Sealer - Hardener B  | <b>Supersedes Date:</b> | 09/11/2020 |
| <b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b> | Component of multicomponent coatings - Professional use only. Coatings and paints, thinners, paint removers. Manual activities involving hand contact. Widespread use leading to inclusion into/onto article (indoor). Widespread use leading to inclusion into/onto article (outdoor). For use by appropriately trained applicators. Roller application or brushing. Advised against: Home DIY applications. Advised against: Spray application, because of the additional hazards. |                         |            |
| <b>1.3 Details of the supplier of the safety data sheet</b>                              |  |                         |            |
| <b>Manufacturer/Supplier</b>   | Tremco CPG Australia Pty Ltd<br>63 Radley Street<br>Virginia QLD 4014<br>Australia<br>T. +61 7 3205 7115<br>F. +61 7 3205 3116<br>www.flowcreteaustralia.com.au  |                         |            |
| <b>Datasheet information obtainable from :</b>   | asia@tremcocpg.com   |                         |            |
| <b>1.4 Emergency telephone number:</b>   | CHEMTREC 1-800-424-9300 (Inside US)<br>CHEMTREC +1 703 5273887 (Outside US)  |                         |            |

### 2. Hazard Identification

#### 2.1 Classification of the substance or mixture

Acute Toxicity, Inhalation, category 4  
 Carcinogenicity, category 2  
 Eye Irritation, category 2  
 Respiratory Sensitizer, category 1  
 STOT, repeated exposure, category 2  
 STOT, single exposure, category 3, RTI  
 Skin Irritation, category 2  
 Skin Sensitizer, category 1

## 2.2 Label elements

### Symbol(s) of Product



### Signal Word

Danger

### Named Chemicals on Label

isocyanic acid, polymethylenepolyphenylene ester, Methylenediphenyl diisocyanate

### HAZARD STATEMENTS

|  |      |  |
|--|------|--|
| Skin Irritation, category 2            | H315 | Causes skin irritation.  |
| Skin Sensitizer, category 1            | H317 | May cause an allergic skin reaction.                                       |
| Eye Irritation, category 2             | H319 | Causes serious eye irritation.   |
| Acute Toxicity, Inhalation, category 4 | H332 | Harmful if inhaled.  |
| Respiratory Sensitizer, category 1     | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| STOT, single exposure, category 3, RTI | H335 | May cause respiratory irritation.  |
| Carcinogenicity, category 2            | H351 | Suspected of causing cancer.   |
| STOT, repeated exposure, category 2    | H373 | May cause damage to organs through prolonged or repeated exposure.         |

### PRECAUTION PHRASES

|              |   |
|--------------|---|
| P260         | Do not breathe dust/fume/gas/mist/vapours/spray.  |
| P280         | Wear protective gloves/protective clothing/eye protection/face protection.  |
| P284         | Wear respiratory protection.  |
| P285         | In case of inadequate ventilation wear respiratory protection.  |
| P302+352     | IF ON SKIN: Wash with plenty of soap and water.   |
| P304+340     | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                    |
| P305+351+338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. |
| P308+313     | IF exposed or concerned: Get medical advice/attention.  |
| P314         | Get medical advice/attention if you feel unwell.  |
| P333+313     | If skin irritation or rash occurs: Get medical advice/attention.  |
| P341         | If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.                     |
| P342+311     | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.   |

### 2.3 Other hazards

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

#### Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

## 3. Composition/Information On Ingredients

### 3.2 Mixtures

#### Hazardous Ingredients

| <u>CAS-No.</u> | <u>Chemical Name</u>                             | <u>%</u> |
|----------------|--|----------|
| 9016-87-9      | isocyanic acid, polymethylenepolyphenylene ester | 50 - <75 |
| 26447-40-5     | Methylenediphenyl diisocyanate                   | 50 - <75 |

| <u>CAS-No.</u> | <u>GHS Symbols</u> | <u>GHS Hazard Statements</u>     | <u>M-Factors</u> |
|----------------|--------------------|----------------------------------|------------------|
| 9016-87-9      | GHS07-GHS08        | H315-317-319-332-334-335-351-373 | 0                |

**Additional Information:** The text for GHS Hazard Statements shown above (if any) is given in Section 16.

## 4. First-aid Measures

### 4.1 Description of First Aid Measures

**GENERAL NOTES:** When symptoms persist or in all cases of doubt seek medical advice. Show this safety data sheet to the doctor in attendance.

**AFTER INHALATION:** Remove person to fresh air. If signs/symptoms continue, get medical attention.

**AFTER SKIN CONTACT:** Use a mild soap if available. Do not use solvent or thinners to clean skin. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

**AFTER EYE CONTACT:** Consult a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

**AFTER INGESTION:** Gently wipe or rinse the inside of the mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention. If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel.

### Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. 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.

### 4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure. Harmful by inhalation. Irritating to respiratory system. Limited evidence of a carcinogenic effect. Irritating to eyes and skin. May cause sensitization by inhalation and skin contact.

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

## 5. Fire-fighting Measures

### 5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

**FOR SAFETY REASONS NOT TO BE USED:** Do not use a solid water stream as it may scatter and spread fire. Alcohol, Alcohol based solutions, any other media not listed above.

### 5.2 Special hazards arising from the substance or mixture

Carbon monoxide, carbon dioxide, nitrogen oxide, cyanides, isocyanate vapours.

### 5.3 Advice for firefighters

Use water spray to cool unopened containers. Fire will produce dense black smoke containing hazardous combustion products (see section 10). In the event of fire, wear self-contained breathing apparatus. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

## 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. For personal protection see section 8.2. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak.

### 6.2 Environmental precautions

Discharge into the environment must be avoided. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### 6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

**INSTRUCTIONS FOR SAFE HANDLING:** People handling polyurethane products must have received special training according to guidelines from the National Occupational Health and Safety Board. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Apply technical measures to comply with the occupational exposure limits (see section 8).

**PROTECTION AND HYGIENE MEASURES:** Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. Handle in accordance with good industrial hygiene and safety practice. Keep working clothes separately. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

**CONDITIONS TO AVOID:** Avoid temperatures above 30 °C, direct sunlight and contact with sources of heat. Do not freeze.

**STORAGE CONDITIONS:** Keep out of the reach of children. Keep at temperatures between 10 and 30 °C. Store in original container. Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Keep away from food, drink and animal feeding stuffs.

### 7.3 Specific end use(s)

Component of multicomponent coatings. The mixing and application to be in accordance with the technical data sheets.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Ingredients with Occupational Exposure Limits

(AU)

| <u>Name</u>   | <u>CAS-No.</u> | <u>TWA ppm</u> | <u>STEL ppm</u> | <u>TWA mg/m<sup>3</sup></u> | <u>STEL mg/m<sup>3</sup></u> |
|---|----------------|----------------|-----------------|-----------------------------|------------------------------|
| isocyanic acid,<br>polymethylenepolyphenylene ester | 9016-87-9      |                |                 | 0.02                        | 0.07                         |
| Methylenediphenyl diisocyanate                      | 26447-40-5     |                |                 | 0.02                        | 0.07                         |

| <u>Name</u>   | <u>CAS-No.</u> | <u>OEL Note</u> |
|---|----------------|-----------------|
| isocyanic acid,<br>polymethylenepolyphenylene ester | 9016-87-9      |                 |
| Methylenediphenyl diisocyanate                      | 26447-40-5     |                 |

**FURTHER INFORMATION:** Refer to the regulatory exposure limits for the workforce enforced in each country.

### 8.2 Exposure controls

#### Personal Protection

**RESPIRATORY PROTECTION:** No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment. Combination filter: A2-P2.

**EYE PROTECTION:** Safety glasses with side-shields conforming to EN 166.

**HAND PROTECTION:** Isocyanates can harden gloves and increase the risk of their splitting. Protective gloves complying with EN 374: Viton®, Neoprene, Nitril rubber, Butyl rubber. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Long sleeved clothing. Remove and wash contaminated clothing before re-use.

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash stations and safety showers are close to the workstation location.

**ENGINEERING CONTROLS:** At temperatures below 30°C, provide a good standard of general ventilation. At temperatures over 30°C - and always if sprayed - exhaust ventilation is required. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

**9.1 Information on basic physical and chemical properties**

|   |                                      |
|---|--------------------------------------|
| <b>Appearance:</b>                                  | Liquid, colour on label              |
| <b>Physical State</b>                               | Liquid                               |
| <b>Odor</b>   | Almost odourless                     |
| <b>Odor threshold</b>                               | Not determined                       |
| <b>pH</b>   | Not determined                       |
| <b>Melting point / freezing point (°C)</b>          | Not determined                       |
| <b>Boiling point/range (°C)</b>                     | 200 - N.D.                           |
| <b>Flash Point, (°C)</b>                            | 100                                  |
| <b>Evaporation rate</b>                             | Not determined                       |
| <b>Flammability (solid, gas)</b>                    | Not determined                       |
| <b>Upper/lower flammability or explosive limits</b> | Not determined                       |
| <b>Vapour Pressure</b>                              | Not determined                       |
| <b>Vapour density</b>                               | Not determined                       |
| <b>Relative density</b>                             | ~1.5 at 20°C (varies by temperature) |
| <b>Solubility in / Miscibility with water</b>       | Insoluble                            |
| <b>Partition coefficient: n-octanol/water</b>       | Not determined                       |
| <b>Auto-ignition temperature (°C)</b>               | Not determined                       |
| <b>Decomposition temperature (°C)</b>               | Not determined                       |
| <b>Viscosity</b>                                    | Not determined                       |
| <b>Explosive properties</b>                         | Not determined                       |
| <b>Oxidising properties</b>                         | Not determined                       |

**9.2 Other information**

|  |                |
|--|----------------|
| <b>VOC Content g/l:</b>                    | Not determined |
| <b>Specific Gravity (g/cm<sup>3</sup>)</b> | 1.500          |

## 10. Stability and Reactivity

**10.1 Reactivity**

No reactivity hazards known under recommended storage and use conditions.

**10.2 Chemical stability**

Stable under recommended storage conditions. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**10.3 Possibility of hazardous reactions**

Polymerises at about 200°C with evolution of CO<sub>2</sub>. Amines and alcohols cause exothermic reactions. Preparation reacts slowly with water resulting in evolution of CO<sub>2</sub>.

**10.4 Conditions to avoid**

Avoid temperatures above 30 °C, direct sunlight and contact with sources of heat. Do not freeze.

**10.5 Incompatible materials**

Keep away from oxidising agents, strongly acid or alkaline materials, as well as of amines, alcohols and water.

**10.6 Hazardous decomposition products**

In case of fire hazardous decomposition products may be produced such as: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke. Preparation reacts slowly with water resulting in evolution of CO<sub>2</sub>. Evolution of CO<sub>2</sub> in closed containers causes overpressure and produces a risk of bursting.

## 11. Toxicological Information

### 11.1 Information on toxicological effects

#### Acute Toxicity:

Oral LD50: No information available.

Inhalation LC50: No information available.

Irritation: No information available.

Corrosivity: No information available.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

| <u>CAS-No.</u> | <u>Chemical Name</u>                                   | <u>Oral LD50</u>    | <u>Dermal LD50</u> | <u>Vapor LC50</u>                | <u>Gas LC50</u> | <u>Dust/Mist LC50</u> |
|----------------|--|---------------------|--------------------|----------------------------------|-----------------|-----------------------|
| 9016-87-9      | isocyanic acid,<br>polymethylenepolyphenylene<br>ester | >10000 mg/kg        | >9400 mg/kg        | 0.49 mg/l (4 h,<br>Aerosol. rat) | 0.000           |                       |
| 26447-40-5     | Methylenediphenyl diisocyanate                         | 15000 mg/kg<br>oral |                    | 43 ppm vapor<br>4hrs             | 0.000           | 0.000                 |

#### Additional Information:

In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Isocyanates may cause acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition.

## 12. Ecological Information

### 12.1 Toxicity:

EC50 48hr (Daphnia): No information

IC50 72hr (Algae): No information

LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

**12.5 Results of PBT and vPvB assessment:** The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

**12.6 Other adverse effects:** No information

| <u>CAS-No.</u> | <u>Chemical Name</u>                             | <u>EC50 48hr</u> | <u>IC50 72hr</u> | <u>LC50 96hr</u> |
|----------------|--|------------------|------------------|------------------|
| 9016-87-9      | isocyanic acid, polymethylenepolyphenylene ester | No information   | 1640 mg/l        | >1000 mg/l       |
| 26447-40-5     | Methylenediphenyl diisocyanate                   | No information   | No information   |                  |

### 13. Disposal Considerations

**13.1 WASTE TREATMENT METHODS:** Dispose of waste material at an approved hazardous waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Contaminated packaging to be disposed of as product. Empty containers should be taken to an approved waste handling site for recycling or disposal. The product should not be allowed to enter drains, water courses or the soil.

### 14. Transport Information

|  |   |
|--|---|
| <b>14.1 UN number</b>  | Not applicable  |
| <b>14.2 UN proper shipping name</b>  | Not regulated for transport according to U.S. DOT, ADR/RID, IMDG, and IATA regulations. |
| <b>Technical name</b>  | Not applicable  |
| <b>14.3 Transport hazard class(es)</b>   | Not applicable  |
| <b>Subsidiary shipping hazard</b>  | Not applicable  |
| <b>14.4 Packing group</b>  | Not applicable  |
| <b>14.5 Environmental hazards</b>  | Not applicable  |
| <b>14.6 Special precautions for user</b>   | Not applicable  |
| <b>EmS-No.:</b>  | Not applicable  |
| <b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code</b> | Not applicable  |
| <b>14.8 ADG Hazchem Code</b>   | Not applicable  |

### 15. Regulatory Information

**15.1 Safety, health and environmental regulations/legislation for the substance or mixture:**

#### National Regulations:

Please contact Manufacturer / Supplier for details related to inventory listing of national regulations.

Australia Australia Inventory of Industrial Chemicals (AIIC)  
 China Inventory of Existing Chemical Substances (IECSC)  
 Japan Inventory of Existing and New Chemical Substances (ENCS)  
 Korea Korea Existing Chemicals Inventory (KECI)  
 New Zealand New Zealand Inventory of Chemicals (NZIoC)  
 Philippines Philippines Inventory of Chemicals and Chemical Substances (PICCS)  
 Taiwan Taiwan Chemical Substance Inventory (TCSI)  
 Thailand Thailand Existing Chemicals Inventory (TECI)  
 Vietnam National Chemical Inventory (NCI)

**15.2 Chemical Safety Assessment:**  
 No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 16. Other Information

### Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

|      |  |
|------|--|
| H315 | Causes skin irritation.  |
| H317 | May cause an allergic skin reaction.                                       |
| H319 | Causes serious eye irritation.   |
| H332 | Harmful if inhaled.  |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation.  |
| H351 | Suspected of causing cancer.   |
| H373 | May cause damage to organs through prolonged or repeated exposure.         |

### Reasons for revision

Composition Information Changed

Substance and/or Product Properties Changed in Section(s):

- 01 - Identification
- 02 - Hazard Identification
- 03 - Composition/Information On Ingredients
- 05 - Fire-fighting Measures
- 08 - Exposure Controls/Personal Protection
- 09 - Physical and Chemical Properties
- 14 - Transportation Information
- 15 - Regulatory Information

Revision Statement(s) Changed

### List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;  
 European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;  
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);  
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

### Acronym & Abbreviation Key:

|        |  |
|--------|--|
| CLP    | Classification, Labeling & Packaging Regulation                        |
| EC     | European Commission  |
| EU     | European Union   |
| US     | United States  |
| CAS    | Chemical Abstract Service  |
| EINECS | European Inventory of Existing Chemical Substances                     |
| REACH  | Registration, Evaluation, Authorization of Chemicals Regulation        |
| GHS    | Globally Harmonized System of Classification and Labeling of Chemicals |
| LTEL   | Long term exposure limit   |
| STEL   | Short term exposure limit  |
| OEL    | Occupational exposure limit  |
| ppm    | Parts per million  |
| mg/m3  | Milligrams per cubic meter   |
| TLV    | Threshold Limit Value  |
| ACGIH  | American Conference of Governmental Industrial Hygienists              |
| OSHA   | Occupational Safety & Health Administration                            |
| PEL    | Permissible Exposure Limits  |
| VOC    | Volatile organic compounds   |
| g/l    | Grams per liter  |
| mg/kg  | Milligrams per kilogram  |
| N/A    | Not applicable   |
| LD50   | Lethal dose at 50%   |
| LC50   | Lethal concentration at 50%  |
| EC50   | Half maximal effective concentration                                   |

|        |   |
|--------|---|
| IC50   | Half maximal inhibitory concentration   |
| PBT    | Persistent bioaccumulative toxic chemical   |
| vPvB   | Very persistent and very bioaccumulative  |
| EEC    | European Economic Community   |
| ADR    | International Transport of Dangerous Goods by Road  |
| RID    | International Transport of Dangerous Goods by Rail  |
| UN     | United Nations  |
| IMDG   | International Maritime Dangerous Goods Code   |
| IATA   | International Air Transport Association   |
| MARPOL | International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 |
| IBC    | International Bulk Container  |
| RTI    | Respiratory Tract Irritation  |
| NE     | Narcotic Effects  |

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.