



## 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>	F01-104-FP-B-NT-3	<b>Revision Date:</b>	09/11/2020
<b>Product Name:</b>	Flowfresh Primer - Hardener B	<b>Supersedes Date:</b>	05/12/2016
<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. Low energy spreading of coatings. Roller application or brushing. Advised against: Home DIY applications. Advised against: Home DIY applications, because of the health hazards and training required. 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 63 Radley Street Virginia QLD 4014 Australia T. +61 7 3205 7115 F. +61 7 3205 3116 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) 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	25 - <50
26447-40-5	Methylenediphenyl diisocyanate	25 - <50

<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. Remove contaminated clothing and shoes. Show this safety data sheet to the doctor in attendance.

**AFTER INHALATION:** Move to fresh air. Consult a physician after significant exposure. 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. Keep eye wide open while rinsing. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

**AFTER INGESTION:** Gently wipe or rinse the inside of the mouth with water. Do NOT induce vomiting. Rinse 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 eyes. Irritating to respiratory system. Irritating to skin. Limited evidence of a carcinogenic effect. Irritating to eyes and skin. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. The substance has delayed effects. Harmful: possible risk of irreversible effects through inhalation.

### 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. Reacts violently with water. 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. Do not allow material to contaminate ground water system. Prevent product from entering drains. Keep the container open. 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). After cleaning, flush away traces with water. 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 immediately after handling the product. Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke.

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

**CONDITIONS TO AVOID:** Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. 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. Store at room temperature in the original container. Keep locked up or in an area accessible only to qualified or authorised persons. 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/m3</u>	<u>STEL mg/m3</u>
isocyanic acid, 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, 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. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. In case of insufficient ventilation wear suitable respiratory equipment. Respirator with a vapor filter.

**EYE PROTECTION:** Ensure that eyewash stations and safety showers are close to the workstation location. 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. Remove contaminated clothing and protective equipment before entering eating areas.

**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. At temperatures below 40°C, provide a good standard of general ventilation (not less than 5 air changes per hour). At temperatures over 40°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>	Brown Liquid
<b>Physical State</b>	Liquid
<b>Odor</b>	Earthy, Musty
<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>	220 °C
<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>	Not determined
<b>Solubility in / Miscibility with water</b>	Not determined
<b>Partition coefficient: n-octanol/water</b>	Not determined
<b>Auto-ignition temperature (°C)</b>	>500°C
<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>	1.000

## 10. Stability and Reactivity

### 10.1 Reactivity

No reactivity hazards known under recommended storage and use conditions. No reactivity hazards known under normal 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 40 °C, direct sunlight and contact with sources of heat. 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. Amines and alcohols cause exothermic reactions.

**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, polymethylenepolyphenylene ester	>10000 mg/kg	>9400 mg/kg	0..49 mg/l (4 h, Aerosol. rat)	0.000	
26447-40-5	Methylenediphenyl diisocyanate	15000 mg/kg oral		43 ppm vapor 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. Dispose of as hazardous waste in compliance with local and national regulations. Container hazardous when empty. 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

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

- 09 - Physical and Chemical Properties
- 14 - Transportation Information
- 15 - Regulatory Information

Revision Statement(s) Changed

. This Safety Data Sheet (SDS) has been revised to meet the new EU CLP requirements. There have been both formatting and content changes based on the CLP classification (if applicable), please review each section of the SDS for specific changes.

**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.

