



Safety Data Sheet
prepared to UN GHS Revision 3

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

- 1.1 Product Identifier** F01-700-FFB(BO)-A-CLR-20 **Revision Date:** 06/04/2017
Product Name: Flowfast Flexible Binder **Supersedes Date:** New SDS
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Component of multicomponent coatings - Industrial and professional use.
- 1.3 Details of the supplier of the safety data sheet**
- Importer:** Flowcrete Australia Pty Ltd
Unit 2, 41 Deakin Street
Brendale Queensland 4500
Australia
Phone: +61 7 3205 7115
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australia@flowcrete.com
www.flowcreteaustralia.com.au
- Datasheet Produced by:** Hadadek, Mohd - malaysia@flowcrete.com
- 1.4 Emergency telephone number:** CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

Flammable Liquid, category 2
STOT, single exposure, category 3, RT1
Skin Irritation, category 2
Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

Methyl methacrylate, 2-Ethylhexyl acrylate

HAZARD STATEMENTS

| | | |
|--|------|--------------------------------------|
| Flammable Liquid, category 2 | H225 | Highly flammable liquid and vapour. |
| Skin Irritation, category 2 | H315 | Causes skin irritation. |
| Skin Sensitizer, category 1 | H317 | May cause an allergic skin reaction. |
| STOT, single exposure, category 3, RTI | H335 | May cause respiratory irritation. |

PRECAUTION PHRASES

| | |
|--------------|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P235 | Keep cool. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P302+352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303+361+353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| 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. |
| P333+313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P403+233 | Store in a well-ventilated place. Keep container tightly closed. |

2.3 Other hazards

No Information

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> |
|----------------|-----------------------|----------|
| 80-62-6 | Methyl methacrylate | 25-50 |
| 103-11-7 | 2-Ethylhexyl acrylate | 10-25 |

| <u>CAS-No.</u> | <u>GHS Symbols</u> | <u>GHS Hazard Statements</u> | <u>M-Factors</u> |
|----------------|--------------------|------------------------------|------------------|
| 80-62-6 | GHS02-GHS07 | H225-315-317-335 | 0 |
| 103-11-7 | GHS07 | H315-317-335 | 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:** Show this safety data sheet to the doctor in attendance.**AFTER INHALATION:** Move to fresh air. Provide fresh air, rest and warmth. Call a physician immediately. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position.**AFTER SKIN CONTACT:** Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Do not use solvent or thinners to clean skin.**AFTER EYE CONTACT:** 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:** If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

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 sensitization by skin contact. Irritating to eyes, respiratory system and skin. May cause headache and dizziness. Acts as a defatting agent on skin.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11. When symptoms persist or in all cases of doubt seek medical advice.

5. Fire-fighting Measures**5.1 Extinguishing Media:**

Carbon Dioxide, Dry Chemical, Foam

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

5.2 Special hazards arising from the substance or mixture

Heating or fire conditions liberates toxic gas. Flash back possible over considerable distance. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors and ignite.

5.3 Advice for firefighters

Fire will produce dense black smoke containing hazardous combustion products (see section 10). Flash back possible over considerable distance. In the event of fire, wear self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Keep containers and surroundings cool with water spray.

6. Accidental Release Measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. 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

Do not let product enter drains. 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). Clean with detergents. Avoid solvents.

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: Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Open drum carefully as content may be under pressure. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Persons with a history of 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.

PROTECTION AND HYGIENE MEASURES: 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 heat, sparks, flames and other ignition sources. Ultraviolet light.

STORAGE CONDITIONS: Maximum storage temperature: +30°C. Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Keep container closed. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Store away from: oxidising materials, acids, and alkalis. Store in upright position only. Storage of flammable liquids.

7.3 Specific end use(s)

No specific advice for end use available.

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> |
|-----------------------|----------------|----------------|-----------------|------------------|-------------------|
| Methyl methacrylate | 80-62-6 | 50 | 100 | 208 | 416 |
| 2-Ethylhexyl acrylate | 103-11-7 | | | | |

| <u>Name</u> | <u>CAS-No.</u> | <u>OEL Note</u> |
|-----------------------|----------------|-----------------|
| Methyl methacrylate | 80-62-6 | |
| 2-Ethylhexyl acrylate | 103-11-7 | |

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

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Use compressed air or fresh air breathing apparatus in closed compartments. Wear respiratory protection with combination filter (dust and gas filter, EN 141) during spraying operations: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).

EYE PROTECTION: If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles.

HAND PROTECTION: 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. Use chemical resistant gloves and lotions and barrier creams to prevent drying of the skin. Protective gloves complying with EN 374: Butyl rubber. Nitril rubber. Recommended glove material for mixed product: Protective gloves complying with EN 374: Butyl rubber. Nitril rubber.

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

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|--|------------------|
| Appearance: | Not determined |
| Physical State | Liquid |
| Odor | strong MMA smell |
| Odor threshold | 0.05 ppm |
| pH | Not determined |
| Melting point / freezing point (°C) | Not determined |

| | |
|---|----------------------|
| Boiling point/range (°C) | 101 - N.D. |
| Flash Point, (°C) | 11 |
| Evaporation rate | Not determined |
| Flammability (solid, gas) | Not determined |
| Upper/lower flammability or explosive limits | Not determined |
| Vapour Pressure | 38.7 mbar (MMA) |
| Vapour density | Not determined |
| Relative density | Not determined |
| Solubility in / Miscibility with water | Insoluble |
| Partition coefficient: n-octanol/water | 1.38 log Pow (MMA) |
| Auto-ignition temperature (°C) | Not determined |
| Decomposition temperature (°C) | Not determined |
| Viscosity | 160 - 200 mPa.s 25°C |
| Explosive properties | Not determined |
| Oxidising properties | Not determined |

9.2 Other information

| | |
|--|-------|
| VOC Content g/l: | 0 |
| Specific Gravity (g/cm³) | 0.120 |

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under recommended storage and use conditions.

10.2 Chemical stability

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution. Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

May polymerise in the presence of radical forming agents and reducing agents with evolution of heat.

10.4 Conditions to avoid

Avoid heat, sparks, flames and other ignition sources. Ultraviolet light.

10.5 Incompatible materials

Strong oxidizing agents. Reducing agents. Avoid radical-forming starting agents, peroxides and reactive metals. Tertiary amines. Sulphur compounds.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide (CO), carbon dioxide (CO₂), oxides of nitrogen (NO_x).

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.

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> |
|----------------|----------------------|------------------------|--------------------|----------------------------|
| 80-62-6 | Methyl methacrylate | 7872 mg/kg (oral, rat) | >5000 mg/kg | 3750 ppm (inhalation, rat) |

Additional Information:

Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. Chronic exposure causes drying effect on the skin and eczema. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Gas or vapour is harmful on prolonged exposure or in high concentrations. Irritant of eyes and mucous membranes. CNS depressant. Inhalation is the main hazard in industrial use. The solvent vapours can be harmful and cause headaches, nausea, and intoxication. Acts as a defatting agent on skin.

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> |
|----------------|-----------------------|------------------|------------------|--------------------|
| 80-62-6 | Methyl methacrylate | 720 mg/l | No information | 125.5 - 275.0 mg/l |
| 103-11-7 | 2-Ethylhexyl acrylate | No information | No information | Not available |

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Empty containers should be taken to an approved waste handling site for recycling or disposal. 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.

14. Transport Information

| | |
|---|----------------|
| 14.1 UN number | 1866 |
| 14.2 UN proper shipping name | Resin Solution |
| Technical name | Not applicable |
| 14.3 Transport hazard class(es) | 3 |
| Subsidiary shipping hazard | Not applicable |
| 14.4 Packing group | II |
| 14.5 Environmental hazards | N/A |
| 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 | ●3Y |

15. Regulatory Information

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

National Regulations:

| | |
|--------------------------------------|---------------|
| Denmark Product Registration Number: | Not available |
| Danish MAL Code: | Not available |
| Danish MAL Code - Mixture: | Not available |
| Sweden Product Registration Number: | Not available |
| Norway Product Registration Number: | Not available |
| WGK Class: | Not available |

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:

| | |
|------|--------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H335 | May cause respiratory irritation. |

Reasons for revision

This is a new Safety Data Sheet (SDS). . .

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/m ³ | 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.