

Version 2

Date Revised: January 2015

conforms to Regulation (EC) no 453/2010

SECTION 1: Identification of the substance/preparation and company/undertaking

1.1 Product identifier: **Flowfast Sprayable Membrane Part B** (supplied in blue tins)

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

Use: Component of a multi pack Methylmethacrylate based membrane. See the relevant technical data sheets for mixing and application instructions. For application by appropriately trained applicators.

Uses advised against: Home DIY (hazardous material + applicators need training.)

1.3 Details of the supplier of the Safety Data Sheet

Flowcrete SA (Pty) Ltd 176 Voortrekker Street, Jacobs, Durban 4052.

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SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Directive DPD 1994/45/EC

F; Highly Flammable (R11).

Xi; Irritant; R37/38. Sensitizer (R43).

2.2 Label elements: Labelling to Directive DPD 1994/45/EC

Hazardous components which must be listed on the label:-

Methyl methacrylate.



Symbols:

Highly Flammable. Irritant

R phrases :
R11 : Highly Flammable.
R37/38 : Irritating to respiratory system and skin.
R43 : May cause sensitization by skin contact.

S phrases :
S09 : Keep container in a well-ventilated place.
S16 : Keep away from sources of ignition - No smoking.
S23 : Do not breathe fumes, vapour.
S24 : Avoid contact with skin.
S33 : Take precautionary measures against static discharges.
S37 : Wear suitable gloves.

Special provisions statement : None.

2.3 Other Hazards

PBT or vPvB: Does not meet the criteria (Regulation No 1207/2006, Annex XIII).

UK Workplace exposure limits - see Section 8.

Methyl methacrylate has a pungent odour that can be detected by the nose at very low concentrations (as low as 0.05 ppm). This is not an indication of dangerous levels of MMA vapour.

Methyl methacrylate is a skin sensitizer. Persons who are sensitized to MMA should not work with this product.

The formation of a vapour/air mixture which can explode is possible. See sections 7, 9 and 10.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture - methyl methacrylate based resin.

Hazardous ingredients:

Name	CAS No. EC No. REACH Reg. No.	% by weight	Classification to 67/548/EEC	Classification to Regulation (EC) No 1278/2008 (CLP)
Methyl methacrylate (MMA)	80-62-6 201-297-1 -	30 - 50	Highly Flammable; F; R11 Irritant; Xi; R37/38 Sensitizer; Xi; R43.	Flammable Liquid cat 2 (H225) Skin Irritation cat 2 (H315) Skin sensitization, cat 1 (H317) Specific Target Organ Toxicity, Single Exposure, respiratory, Category 3 (H335)

If REACH registration numbers do not appear, the substance is either exempt from registration, does not meet the minimum volume threshold for registration, the registration date for our supplier has not yet come due or we have not yet been informed.

See section 16 for full text regarding symbols (Xn etc.), risk phrases (R20 etc.) and hazard statements (H322 etc.)

SECTION 4: First aid measures

4.1 Description of first aid measures

- Skin contact** : Wash with soap and plenty of water or a suitable skin cleanser as soon as possible. Remove all contaminated clothes and shoes. If irritation persists, seek medical advice.
- Eye Contact** : Hold eyelids apart and carefully and thoroughly flush with plenty of water for at least 15 minutes. Seek medical advice if irritation persists.
- Inhalation** : Remove affected person from exposure, keep them warm and at rest. Obtain medical attention if symptoms persist.
- Ingestion** : If the person is conscious, wipe and wash out mouth with water. Do not swallow mouth wash. Do not induce vomiting. Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed

- Skin contact** : There may be irritation at the site of contact. Patient may become sensitized to the product by prolonged and/or repeated contact. Once sensitized, the person may suffer an allergic eczema reaction each time they use MMA.
- Eye Contact** : There may be irritation and redness.
- Inhalation** : There may be irritation of the nose, throat and mucous membranes.
- Ingestion** : There may be irritation of the throat.

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

Not applicable.

SECTION 5: Firefighting measures

5.1. Extinguishing Media

Suitable extinguishing media

Carbon dioxide (CO₂), foam, dry powder. Water spray should be used for larger fires.

Un-Suitable extinguishing media

High volume water jet.

5.2. Special hazards arising from the substance or mixture

Material is Highly Flammable and vapour/air mixtures that are explosive can be formed.

Vapours are heavier than air and flashback over considerable distances is possible.

Hazardous combustion products

Burning produces carbon oxides (carbon monoxide + carbon dioxide).

5.3 Advice for Firefighters

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Use water spray to cool containers, vapours generated on heating are combustible.

Do not allow contaminated extinguishing water to enter the soil, drains, sewers or water courses.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures.****Personal precautions**

Use personal protective equipment as detailed in SECTION 8. Remove all sources of ignition.

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate the soil, drains, sewers or water courses. Bund to prevent entry into drains, sewers and water courses.

6.3 Methods and materials for containment and cleaning up

Prevent further leakage or spillage, turn leaking containers leak-side up to prevent the escape of liquid.

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

Soak up with non-combustible, inert, absorbent material (e.g. sand, earth). Shovel into suitable containers.

Dispose in accordance with SECTION 13. Wash the area with plenty of water.

6.4 References to other Sections.

Use personal protective equipment as detailed in SECTION 8. Dispose in accordance with SECTION 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Use personal protective equipment as detailed in SECTION 8. Use only in well-ventilated areas.

Handle and open container with care as the contents may be under pressure. Avoid skin and eye contact.

If required, provide exhaust ventilation close to floor level. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Vapours may form an explosive mixture with air. Keep product and empty container away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge. Do not use sparking tools. Use only explosion-proof equipment. Have fire extinguishers ready before opening the drum.

7.2. Conditions for safe storage, including any incompatibilities

Never fill containers more than 80 % because aerial oxygen is necessary for stabilising.

Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

Keep in an area equipped with solvent resistant flooring.
Do not store together with oxidizing and self-igniting products.
Any existing regulations on the handling of flammable liquids must be observed.

7.3. Specific end use(s)

Spray applied waterproofing membrane and coating.
This component is first mixed with the catalyst and then the Part A resin, which are also hazardous materials.
Ensure mixing and application are in accordance with the relevant technical data sheets.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

UK Workplace Exposure Limits (WEL):

CAS 80-62-6 methyl methacrylate	8 hour Time Weighted Average (TWA) 50 ppm (208 mg/m ³)	15 minute Short Term Exposure Limit (STEL) 100 ppm (416 mg/m ³)
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8.2. Exposure controls

Engineering measures to reduce exposure : Not required in a well ventilated work zone.

If required, provide extraction at floor level as the vapours are heavier than air.

Respiratory protection : Respirator with filter for organic vapour. If not sufficient to maintain concentrations below the WEL, wear a hood provided with its own air supply.

Eye protection : Safety spectacles, goggles or full face mask. Provide readily accessible eye wash station(s).

Hand protection : Solvent resistant gloves.
Check regularly for degradation and replace gloves as necessary.
Avoid skin contact with the wetted surfaces of the gloves.

The performance of gloves of a specific type can vary from supplier to supplier. Take note of the information from the glove suppliers concerning permeability and break through times and of any special workplace conditions (e.g. mechanical strain, duration of contact). Check gloves regularly for degradation/holes and replace as necessary.

Skin and body protection : Overalls and heavy duty work shoes.
Remove and wash any contaminated clothing before reuse.

Protective measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separate. When using do not eat, drink or smoke.
Provide readily accessible eye wash station(s).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: pigmented liquid.	Relative Density	: 1.23 at 25°C.
Odour	: Pungent, acrylic	pH	: Not determined.
Initial Boiling Point	: 100.3°C (MMA)	Evaporation rate	: Not determined.
Solubility	: Insoluble in water	Vapour pressure	: 38.7 mbar (MMA)
Vapour Density	: Not determined	Viscosity	: 1300 - 2700 mPas (25°C)
Flashpoint	: 11.5°C (closed cup) (MMA)		
Partition coefficient	: n-octanol/water : 1.38 log Pow (MMA)		

Explosive properties : The product is not explosive, but the formation of vapour/air mixes which can explode is possible.

Vapour/air explosion limits	Lower Explosion limit	: Upper Explosion Limit
Methyl methacrylate	2.1%	: 12.5%

9.2 Other information

Melting point -48°C (MMA).

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Material is stable when stored and handled in accordance with safety and technical data.

10.3 Possibility of hazardous reactions.

Hazardous reactions will not occur under normal transport or storage conditions.

Polymerisation occurs when this material is exposed to white light, ultraviolet light or heat. Polymerisation is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers.

10.4 Conditions to avoid

Heat, flames and sparks. Exposure to sunlight.

High concentrations of MMA vapour in air have the potential to cause an explosion (2.1 - 12.5% by weight). Maintain the vapour concentration below the WEL (Section 8) to help prevent this.

10.5 Incompatible materials

Avoid radical-forming starting agents, peroxides and reactive metals. Amines. Heavy metal compounds. Oxidizing agents. Reducing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.
Toxic vapours are generated in a fire - carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects.

Acute Toxicity LD₅₀/oral/rat = 7872 mg/kg (MMA)
 LC₅₀/inhalation/4h/rat = 3750 ppm (MMA)

Skin contact : There will be irritation and redness at the site of contact.

Eye Contact : There may be some irritation and redness.

Inhalation : Irritating to mucous membranes. Odour Threshold 0.05 ppm (MMA).

Ingestion : There may be irritation of the throat.

Sensitization : May cause sensitization by skin contact. Once sensitised, persons may suffer an allergic eczema reaction every time they use this material.

SECTION 12: Ecological information

12.1. Toxicity

No data is available on the product itself.

Data below for methyl methacrylate

Toxicity to fish:	LC ₅₀ Oncorhynchus mykiss > 79 mg/l, OECD 203, GLP, 96 h
Toxicity to daphnia:	EC ₅₀ Daphnia magna 69 mg/l, OECD 202, 48 h
Toxicity to daphnia:	NOEC Daphnia magna 37 mg/l, OECD 202 Part 2, 21 d
Toxicity to algae:	EC ₃ Scenedesmus quadricauda 37 mg/l, DIN 38412 Part 9, 8d
Toxicity to algae:	EC ₅₀ Selenastrum capricornutum 170 mg/l, OECD 201, 96 h
Toxicity to bacteria:	EC ₀ Pseudomonas putida 100 mg/l

12.2. Persistence and degradability

No data is available on the product itself.
Biodegradation for MMA: 94 % OECD 301 C, 14 d

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

No data is available on the product itself.

12.5. Results of PBT and vPvB assessment

This substance is not identified as a PBT or vPvB substance (Regulation No 1207/2006, Annex XIII)

12.6. Other adverse effects

None known to us.

Additional information : Do not empty into drains, sewers or water courses.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of in accordance with local and national regulations, landfill or incineration.
Do not empty into drains, sewers or water courses.

Unused Product/waste from cleaning etc. : A hazardous waste. In the EU, use List of Wastes (LoW) Code : 080111*.

Contaminated packaging : Partially filled containers shall be disposed as for the product above.
Well drained containers shall be disposed of as hazardous packaging waste.
In the EU, use List of Wastes (LoW) Code 150110*.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number 1866

14.2 UN proper shipping name Resin Solution



14.3 Transport hazard class(es) 3

14.4 Packing group II

14.5 Environmental hazards Marine Pollutant - No.

14.6 Special precautions for user Not relevant.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

Other information: Flashpoint 11.5°C.

ADR/RID

Classes	: 3	Environmental Hazard label	: No.
HI No	: 33	Packing Group	: II
Transport Category	: 2	Tunnel Restriction Code	: (D/E)

Contains : Methyl methacrylate
IMDG
Classes : 3 Environmental Hazard label : No.
Packing Group : II Marine Pollutant : No.
Contains : Methyl methacrylate

IATA
Classes : 3 Packing Group : II
Contains : Methyl methacrylate

SECTION 15: Regulatory information

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

EC Directives Dangerous Substances Directive, 67/548/EEC & adaptations.
Dangerous Preparations Directive, 1999/45/EC.
Safety Data Sheets Directive, 91/155/EEC and adaptations.
Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) No. 1272/2008

UK Statutory Instruments Chemicals (Hazard Information & Packaging for Supply) Regs. (CHIP)
Control of Substances Hazardous to Health Regs. (COSHH)
Environmental Protection (Duty of Care) Regs.

UK Codes of Practice Waste Management. The Duty of Care.
Approved classification and labelling guide (Sixth edition). L131.

Guidance Notes UK - Workplace Exposure Limits EH40.
UK - CHIP for Everyone HSG (228).
Guidance on the compilation of safety data sheets, version 1.1 Dec 2011.
UK - Safe use and handling of flammable liquids HSG140.

Any existing regulations on the handling of flammable liquids must be observed.
Airborne emissions must be controlled within local and national limits, in accordance with the appropriate legislation.

Subject to EU Directive 96/82 EC (Seveso II Directive), category 7b, R11 Highly Flammable.
(Control of Major Accident Hazards (COMAH) Regulations in the UK).

Mixed material, ready for use, meets the requirements of Directive 2004/42/EC ("the VOCs in Paints Directive") - in the UK
"The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2005".
EU limit value for this product:- (cat A/j), solvent based: 500 g/l (2010).

15.2 Chemical Safety Assessment.

A Chemical Safety Assessment has not been carried out for the mixture by the supplier.

SECTION 16: Other Information

This safety data sheet has been prepared in accordance with Regulation (EC) no 1272/2008 & amendments.
UK users of our products should take appropriate measures to ensure working practices are in accordance with the Control of Substances Hazardous to Health Regulations (COSHH).
This data sheet does not replace the obligation of the user to provide their own assessment of workplace risk as required by other Health & Safety legislation.

Previous version: Version 1 Date: 2nd June 2009.
The text has changed in all sections to meet the requirements of the new safety data sheet format, plus REACH and GHS legislation.

Restrictions on Use

This material is intended for professional use only.

Training Advice

Operatives need to be trained in:-
Handling and hygiene associated with use of industrial chemicals.
Mixing and application of the mixed product.
Correct cleaning and disposal methods.

Notes

ADR = Accord européen sur le transport des marchandises dangereuses par Route.
(European Agreement concerning the International Carriage of Dangerous Goods by Road).
RID = Règlement international concernant le transport des marchandises dangereuses par chemin de fer.
(Regulations Concerning the International Transport of Dangerous Goods by Rail).
IATA = International Air Transport Association.
IMDG = International Maritime Code for Dangerous Goods.
REACH = Registration, Evaluation, Authorization and restriction of CHemicals.
GHS = Globally Harmonised System (UN system of classification being adopted worldwide).
CLP = Classification, Labelling and Packaging (EU implementation of GHS).

Note: By June 2015 all EU safety data sheets and labelling will be in GHS/CLP format only.

EC Directive relating to the classification, packaging and labelling of dangerous substances and preparations –
Classification(s) and Risk (R) phrase(s) referred to in this document:

Xi : Irritant F : Highly Flammable
R11 : Highly Flammable.
R37/38 : Irritating to respiratory system and skin.
R43 : May cause sensitisation by skin contact.

Full text of hazard statements referred to (in sections 2 and 36) regarding GHS/CLP classifications (1272/2008/CE) -

H225 : Highly flammable liquid and vapours
H315 : Causes skin irritation
H317 : May cause an allergic skin reaction.
H335 : May cause respiratory irritation

This safety data sheet is based on our present knowledge and experience and is intended to serve as a guide for safe handling of the product regarding to health and environmental aspects.