Flowcrete
for the world at your feet

Safety Data Sheet according to Regulation (EC) No. 2015/830

SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier

Product Name: Flowflex Concrete Primer v2

FLOWFLEX CONCRETE PRIMER V2

Revision Date: 06/06/2019

Supercedes Date: New SDS

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

Professional use only. For use by appropriately trained applicators. Advised against: Home DIY applications, because of the health hazards and training required.

1.3 Details of the supplier of the safety data sheet

Supplier:

Flowcrete UK Ltd.
The Flooring Technology Centre
Booth Lane
Moston, Sandbach, Cheshire. UK
CW11 3QF

Tel: +44 (0)1270 753000
Fax: +44 (0)1270 753333
ehs.uk@flowcrete.com
http://www.flowcrete.co.uk

Datasheet Produced by: ehs.uk@flowcrete.com

1.4 Emergency telephone number:

CHEMTREC +001 703 5273887 (Outside US)
CHEMTREC 1-800-424-9300 (Inside US)

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

HAZARD STATEMENTS

Other EU extensions	EUH204
Flammable Liquid, category 3	H226
Aspiration Hazard, category 1	H304
Acute Toxicity, Dermal, category 4	H312
Skin Irritation, category 2	H315
Skin Sensitizer, category 1	H317
Eye Irritation, category 2	H319
Acute Toxicity, Inhalation, category 4	H332
Respiratory Sensitizer, category 1	H334
STOT, single exposure, category 3, RTI	H335

Carcinogenicity, category 2	H351
STOT, repeated exposure, category 2	H373

2.2 Label elements

Symbol(s) of Product

Signal Word

Danger

Named Chemicals on Label

4,4'-Methylenediphenyl diisocyanate, , Diphenylmethane-2,4'-diisocyanate, Methylenediphenyl diisocyanate, aromatic polyisocyanate

HAZARD STATEMENTS

Other EU extensions	EUH204	Contains isocyanates. May produce an allergic reaction.
Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Aspiration Hazard, category 1	H304	May be fatal if swallowed and enters airways.
Acute Toxicity, Dermal, category 4	H312	Harmful in contact with skin.
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

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	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+P313	IF exposed or concerned: Get medical advice/attention
P314	Get medical advice/attention if you feel unwell.
P331	Do NOT induce vomiting.
P362+364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to waste treatment/disposal facility in accordance with local, state, and federal regulations.

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.

SECTION 3: Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	EINEC No.	Name According to EEC	%
	905-562-9		50 - <75
67815-87-6	204-469-4	aromatic polyisocyanate	25 - <50
26447-40-5	247-714-0	Methylenediphenyl diisocyanate	10 - <25
101-68-8	202-966-0	4,4'-Methylenediphenyl diisocyanate	1.0 - <2.5
5873-54-1	227-534-9	Diphenylmethane-2,4'-diisocyanate	1.0 - <2.5

CAS-No.	REACH Reg No.	CLP Symbols	CLP Hazard Statements	M-Factors
	01-2119555267-33	GHS02-GHS07-GHS08	H225-304-312-315-319-332-335-373	
67815-87-6		GHS08	H317-334	
26447-40-5		GHS07-GHS08	H315-317-319-332-334-335-351-373	
101-68-8	01-2119457014-47	GHS07-GHS08	H315-317-319-332-334-335-351-373	
5873-54-1	01-2119480143-45	GHS07-GHS08	H315-317-319-332-334-335-351-373	

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

SECTION 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.
AFTER INHALATION: Move to fresh air. Keep respiratory tract clear. Remove person to fresh air. If signs/symptoms continue, get medical attention.
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 solvents or thinners.
AFTER EYE CONTACT: Keep eye wide open while rinsing. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. If symptoms persist, call a physician or Poison Control Centre immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. 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

No Information

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.

SECTION 5: Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

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

In use, may form flammable/explosive vapour-air mixture.

5.3 Advice for firefighters

Keep containers and surroundings cool with water spray. 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. Water mistDry powderFoamCarbon dioxide (CO2). Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

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). Ventilate the area. Refer to protective measures listed in sections 7 and 8.

6.4 Reference to other sections

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

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Take measures to prevent the build up of electrostatic charge. Vapours may form explosive mixtures with air. 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. Provide exhaust ventilation close to floor level. As a rule, at least 10 air changes per hour are recommended at the workplace. Wear personal protective equipment. Open drum carefully as content may be under pressure. Use only in well-ventilated areas. Keep product and empty container away from heat and sources of ignition. Use only explosion-proof equipment. Have fire extinguishers ready before opening the drum. Do not use sparking tools.
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. Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice for diagnostics.

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. Heat, flames and sparks. Direct sources of heat. Strong sunlight for prolonged periods.
STORAGE CONDITIONS: Store in original container. Store at room temperature in the original container. Keep in an area equipped with solvent resistant flooring. 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.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits
(UK WELS)

Name	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
aromatic polyisocyanate	67815-87-6				
Methylenediphenyl diisocyanate	26447-40-5				0.02
4,4'-Methylenediphenyl diisocyanate	101-68-8			0.07	0.02
Diphenylmethane-2,4'-diisocyanate	5873-54-1			0.07	0.02

Name	CAS-No.	OEL Note
aromatic polyisocyanate	67815-87-6	
Methylenediphenyl diisocyanate	26447-40-5	
4,4'-Methylenediphenyl diisocyanate	101-68-8	Isocyanates, all (as -NCO)
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Isocyanates, all (as -NCO)

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: 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 filter for organic vapor.

EYE PROTECTION: Eye wash bottle with pure water. Safety goggles. Tightly fitting safety goggles. Safety glasses with side-shields conforming to EN 166.

HAND PROTECTION: Solvent-resistant gloves. 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). Follow the skin protection plan. Long sleeved clothing. Remove and wash contaminated clothing before re-use. Flame retardant antistatic protective clothingProtective suit. Remove contaminated clothing and protective equipment before entering eating areas.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: As a rule, at least 10 air changes per hour are recommended at the workplace. Avoid contact with skin, eyes and clothing. Maintain air concentrations below occupational exposure standards. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn. Ensure adequate ventilation, especially in confined areas.

Chemical Name:

4,4'-Methylenediphenyl diisocyanate

EC No.: 202-966-0

CAS-No.: 101-68-8

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					20 mg/kg bw/d		
Inhalation	0.1 mg/m³	0.1 mg/m³	0.05 mg/m³	0.05 mg/m³	0.05 mg/m³	0.05 mg/m³	0.025 mg/m³	0.025 mg/m³
Dermal	28.7 mg/cm²	50 mg/kg bw/d			17.2 mg/cm²	25 mg/kg bw/d		

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	>1 mg/l
Fresh water sediments	
Marine water	>0.1 mg/l
Marine sediments	
Food chain	
Microorganisms in sewage treatment	>1 mg/l
soil (agricultural)	>1 mg/kg
Air	

Chemical Name:

Diphenylmethane-2,4'-diisocyanate

EC No.: 227-534-9

CAS-No.: 5873-54-1

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					20 mg/kg bw/d		
Inhalation	0.1 mg/m³	0.1 mg/m³	0.05 mg/m³	0.05 mg/m³	0.05 mg/m³	0.05 mg/m³	0.025 mg/m³	0.025 mg/m³
Dermal	28.7 mg/cm²	50 mg/kg bw/d			17.2 mg/cm²	25 mg/kg bw/d		

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	>1 mg/l
Fresh water sediments	
Marine water	>0.1 mg/l
Marine sediments	
Food chain	
Microorganisms in sewage treatment	>1 mg/l
soil (agricultural)	>1 mg/kg
Air	

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Yellowish Liquid
Physical State	Liquid
Odor	Not determined
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	140 - N.D.
Flash Point, (°C)	52
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	0.93 g/cm3
Solubility in / Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	50mPa.s
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l: Not determined

This is a calculated maximum VOC content for the mixed ready to use product (to Directive 2004/42/EC).

SECTION 10: Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Reacts with oxidising agents.

10.4 Conditions to avoid
Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. Heat, flames and sparks. Direct sources of heat. Strong sunlight for prolonged periods.

10.5 Incompatible materials
Do not store together with oxidizing and self-igniting products. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6 Hazardous decomposition products
In case of fire **hazardous decomposition products** may be produced such as**:** Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). No dangerous reaction known under conditions of normal use. nitrogen oxides (NOx)

SECTION 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:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
		3523ppm		6350ppm		0.000
26447-40-5	Methylenediphenyl diisocyanate	15000 mg/kg oral		43 ppm vapor 4hrs	0.000	0.000
101-68-8	4,4'-Methylenediphenyl diisocyanate	>2000 mg/kg (rat)	>9400 mg/kg (rabbit, OECD TG 402)			1.5 mg/l (ATE)
5873-54-1	Diphenylmethane-2,4'-diisocyanate	>2000 mg/kg (rat)	>9400 mg/kg (rabbit, OECD TG 402)			1.5 mg/l (ATE)

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.

SECTION 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

CAS-No.	Name According to EEC	EC50 48hr	IC50 72hr	LC50 96hr
		No information	No information	2.6mg/L
67815-87-6	aromatic polyisocyanate	No information	No information	
26447-40-5	Methylenediphenyl diisocyanate	No information	No information	
101-68-8	4,4'-Methylenediphenyl diisocyanate	> 1000 mg/l (24h) OECD 202	> 1640 mg/l OECD 201	> 1000 mg/l (danio rerio) OECD 203
5873-54-1	Diphenylmethane-2,4'-diisocyanate	>1000 mg/l OECD 202	>1640 mg/l OECD 201	>1000 mg/l (danio rerio) OECD 203

SECTION 13: Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. 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.

European Waste Code: 150110
Packaging Waste Code: 150110

SECTION 14: Transport Information

14.1	UN number	UN1866
14.2	UN proper shipping name	Resin Solution Flammable
	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	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

SECTION 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
Germany WGK Class:	Not available
Covered by Directive 2012/18/EC (Seveso III):	Not applicable
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Not applicable

Annex XIV - Authorisation List:

CAS-No.	Name According to EEC
Not Applicable	

SVHC - Substances of very high concern (Candidate List):

CAS-No.	Name According to EEC
Not Applicable	

15.2 Chemical Safety Assessment:

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

SECTION 16: Other Information

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

H225	Highly flammable liquid and vapour.

H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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

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.