1. Substance / Product identification:

Product identification: Mareflex MF40 Pipe Repair Kit
Product type: MF40 Epoxy Putty

Contact details of the supplier of the safety data sheet:

Mareflex GmbH
Peutestrasse 53C / 108A
20539 Hamburg
Germany

Tel.: +49 40 210 918 890
Email: mareflex@mareflex.com

2. Hazards identification:

I. Classification according to Regulation (EC) No 1272/2008 (EU-GHS/CLP)

Hazard Statements:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Prevention Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.

Response Precautionary Statements:

P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363:	Wash contaminated clothing before reuse.
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 – continue rinsing.

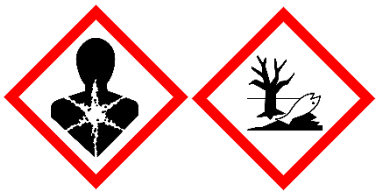
Storage Precautionary Statements:

P405	Store locked up.

Disposal Precautionary Statements:

P501	Dispose of contents/container in accordance with local or international regulations.

Label Elements
Labeling according to the Regulation (EC) No 1272/2008 (CLP)
Pictogram



3. Composition/Information on Ingredients

Chemical name	CAS no.	EINECS no.	Weight (%)
Silicon dioxide	7631-86-9	231-545-4	40
Calcium carbonate	1317-65-3	/	29
Epoxy resin	25068-38-6	/	15
Diethylenetriamine	111-40-0	203-865-4	8
Methyl acrylate	86-33-3	202-500-6	5
Pyromellitic dianhydride	89-32-7	201-898-9	3

4. First Aid Measures

General information
If some of the symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps. In case of allergic symptoms, especially in the breathing area, seek medical attention immediately.
Inhalation
Remove affected person from contaminated area and keep at rest in a position comfortable for breathing. If breathing is irregular provide oxygen. If breathing has stopped provide artificial respiration. Seek medical attention.
Eye contact
Flush the eyes continuously with running water for several minutes. Do not rub eyes. Keep the eyelids open. If symptoms develop or persist seek medical attention immediately.
Skin contact
Remove all contaminated clothing immediately. Wash affected skin thoroughly with soap and water. Do not use solvents or thinners. In case of accidental skin contact avoid concurrent exposure to the sun or other sources of UV light, which may increase the sensitivity of skin.

Ingestion
Do not induce vomiting. Obtain medical attention. If vomiting should occur spontaneously, keep airway clear: keep head above hips to prevent aspiration. For advice, contact a Poisons Information Centre or a doctor (at once).

First Aid Facilities:	Eyewash and normal washroom facilities.
Advice to Doctor:	Treat symptomatically.
Other information:	Pay attention to self-protection.

5. Fire-fighting Measures

Flammable properties
Combustible if exposed to fire.
Special Remarks on Fire Hazards
This product may decompose upon fire and produce irritation fume. Silicon dioxide, calcium oxides, carbon oxides, nitrogen oxides (NOx), hydrogen chloride and hydrocarbons may be released at elevated temperatures or in a fire.
Extinguishing Media
Use water spray, dry chemical, carbon dioxide, or chemical foam. Use water spray to cool down the container during fire. Move containers to empty department if possible. If the container colour is changed or some sound is produced from container, evacuate immediately. Use water to dilute released material into a incombustible mixture.
Unsuitable extinguishing media
Not be used for safety reasons: water jet.
Special Fire Fighting Procedures
Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing for fires in areas where chemicals are used or stored.
Remark
Stop the fire spreading. Call the fire brigade immediately. Evacuate non-essential personnel. Fight fire from safe location.

6. Accidental Release Measures

Personal precautions and emergency procedures
Keep unprotected people away. Remove all sources of ignition. Provide enough ventilation. Do not breath dust or vapour. Wear protective equipment and use protective gloves. Respiratory protection is not needed during normal use. If respiratory protection is needed, air supply mask or respirator with canister for organic vapours/isocyanates is recommended.
Environmental precautions
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Advise the environmental authorities if substance has entered a watercourse or sewer.
Methods for cleaning up
Collect material avoiding dust generation – then transfer the material in to suitable labelled containers for subsequent recycling or disposal.

Regulatory Requirements
Follow applicable national and local laws and regulations.

7. Handling and storage

Precautions for Safe Handling
Ensure good ventilation or exhaustion at the workplace. Use appropriate personal protective clothing and equipment to prevent inhalation, skin and eye exposure. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash thoroughly after handling and before eating, drinking and smoking. Void breathing dust/ fume/ gas/ mist/ vapours/ spray. Do not get in eyes or on skin or clothing. Do not ingest. Keep container tightly closed when not in use. Do not handle until all safety precautions have been read and understood.
Conditions for safe Storage
Store in original, labelled and tightly closed container in a cool, dry and well-ventilated place. Keep away from oxidising agents, from strongly alkaline and strongly acid materials. Do not store near fire or overheated place. Do not store near food or feed. Ensure that storage conditions comply with applicable national and local laws and regulations.

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8. Exposure Controls / Personal Protection

Exposure limits

Substance	ACGIH TLV	OSHA PEL
Silicon dioxide (CAS No. 7631-86-9)	10 mg/m3 TWA	6 mg/m3 TWA
Diethylenetriamine (CAS No. 111-40-0)	1 ppm TWA	/

Engineering Controls
Use local exhaust ventilation.

Eye protection
Use safety glasses with side shields designed to protect against splash of liquids.
Skin protection
For gloves there are no materials of combinations of materials available who give an unlimited protection against chemicals or combination of chemicals. For prolonged or repeated handling nitrile rubber gloves with textile under gloves are required.
Body protection
Suitable protective workwear.
Respiratory protection
Respiratory protection necessary at: exceeding exposure limit values Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used. Examination of lung function should be carried out on a regular basis on persons spraying this product.
General health and safety measures
When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Wash hands before breaks and after work. Immediately remove any contaminated clothing, shoes or stockings.

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9. Physical and Chemical Properties

General Information	
Odor	Slightly irritating
Colour	Green appearance with white inside
Appearance	Putty stick
Viscosity	Not available
Melting point / Melting range	Not available
Decompositions temperature	Not available
Boiling point	Not available
Flash Point	Not available
Vapour pressure	Not available
Relative Density	Not available
Flammability	Combustible
Solubility in Water	Insoluble

10. Stability and Reactivity

Chemical stability
Stable under recommended storage and handling conditions
Conditions to avoid
Open flame or excessive heat.
Incompatibility (materials to avoid)
strong oxides, strong acid.
Hazardous decomposition products
May form toxic materials upon combustion. Silicon dioxide, calcium
oxides, carbon oxides, nitrogen oxides (NOx), hydrogen chloride and various hydrocarbons.
Hazardous polymerization
Polymerization will occur at room temperature if exposed.

11. Toxicological Information

Acute toxicity
EPOXY RESIN (CAS: 25068-38-6):
LD50=11400 mg/kg (Oral, Rat); LD50> 1200 mg/kg (Dermal, Rat).
Diethylenetriamine (CAS No 111-40-0):
LD50 =1.080 mg/kg(Oral, Rat) Remarks: Behavioral: Convulsions or effect on seizure threshold.
LD50 = 1.090 mg/kg(Dermal, Rabbit).

Inhalation
May cause sensitisation by inhalation. May cause asthmatic symptoms in hypersensitive persons.
Eye contact
Causes serious eye damage. The symptoms may include redness, itching and swelling.
Skin contact
May be irritating to skin. May produce an allergic reaction.

Ingestion
Ingestion may cause irritation. Harmful if swallowed.

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12. Ecological Information

Toxicity
Harmful to aquatic life with long lasting effects.
Mobility
Insoluble in water
Environmental precautions
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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13. Disposal Considerations

Waste disposal
Disposal should be in accordance with local and National regulations via a licensed waste contractor.

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14. Transport Information

Road Transportation (ADR/RID)
No dangerous good in sense of these transport regulations.
Air Transportation (IATA /ICAO)
No dangerous good in sense of these transport regulations.
Marine Transportation (IMO/IMDG)
No dangerous good in sense of these transport regulations.

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15. Regulatory Information

This safety data sheet has been prepared according to EC Regulation No. 453/2010. The product has been classified in accordance with EC Regulations, No. 1272/2008/EC, No. 1999/45/EC and No. 67/548/EEC.

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16. Other Information

Abbreviations:
pH - Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline
OSHA- Occupational Safety and Health Administration
IARC- International Agency for Research on Cancer
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds
ADR –Agreement on Dangerous Goods by Road
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail
ICAO –International Civil Aviation Organization
IATA –International Air Transport Association

Remarks:

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.