

Trade name: **FLUP® - PCE-104**

Revised on: 22 October 2018

Version: 1.0 (replaces all previous versions)

1 NAME OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

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

Concrete superplasticiser

1.3 Details of the supplier providing the safety data sheet

Manufacturer/Supplier:

Backstein Engineering GmbH
Langgasse 21
D-65510 Idstein
Germany
Tel. +49 (0) 6434/9089115
Email: shop@moertelshop.com

1.4 Emergency number

Joint Poisons Information Centre (GGIZ) for the states of Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia
GGIZ 24-hour German-language emergency number: Telephone number +49 361 730730
For Austria: Poison Information Centre of Gesundheit Österreich GmbH: Telephone number +43 1 406 43 43

2 POTENTIAL HAZARDS

2.1 Classification of the substance or mixture in accordance with Regulation (EC) No 1272/2008

The product is not subject to classification according to GHS criteria.

2.2 Labelling elements in accordance with Regulation (EC) No 1272/2008

2.2.1 Pictograms and signal word for the product

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The product is not subject to labelling requirements under GHS criteria.

2.2.2 Hazard-determining components for labelling

Not applicable

2.2.3 Hazard statements

Not applicable

2.2.4 Precautionary statements

Not applicable

2.3 Other hazards

Not applicable

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

3.2.1 Composition/Information on ingredients

Polymer based on polycarboxylate ether

3.2.2 Hazardous ingredients

No specific hazards known

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4 FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 General instructions

First aiders should ensure their own safety. Remove contaminated clothing immediately.

4.1.2 After skin contact

If the product comes into contact with the skin, wash immediately with plenty of soap and water. Do not use solvents under any circumstances. If irritation occurs, seek medical advice.

4.1.3 After eye contact

Rinse thoroughly under running water for 15 minutes with eyelids held open; follow-up examination by an ophthalmologist.

4.1.4 After inhalation

After inhaling dust: Rest, fresh air, seek medical assistance

4.1.5 If swallowed

Rinse mouth immediately and drink plenty of water; seek medical advice. Only induce vomiting if instructed to do so by a poison control centre or a doctor.

4.2 Most important acute and delayed symptoms and effects

Symptoms: The most important known symptoms and effects are described on the product label (see Section 2) and/or in Section 11.

4.3 Indications for immediate medical attention or special treatment

Treatment: Symptomatic treatment (decontamination, vital signs), no specific antidote known.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
Foam, water spray, dry powder, carbon dioxide

Extinguishing media unsuitable for safety reasons: full-power water jet

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5.2 Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, harmful fumes, nitrogen oxides, smoke, soot

5.3 Firefighting instructions

Special protective equipment: Wear self-contained breathing apparatus.

Further information: The hazard depends on the burning materials and the fire conditions. Cool containers at risk from heat with water. Collect contaminated fire-fighting water separately; it must not enter the sewerage system or wastewater. Contaminated fire-fighting water must be disposed of in accordance with official regulations.

6 MEASURES IN CASE OF ACCIDENTAL RELEASE

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe dust. Wear safety goggles/face protection. Use personal protective clothing. Observe the usual precautions when handling chemical building materials.

6.2 Environmental precautions

Retain contaminated water/fire-fighting water. Do not allow to enter drains/surface water/groundwater.

6.3 Methods and materials for containment and cleaning

For small quantities: Collect and dispose of using suitable equipment. Dispose of contaminated material in accordance with regulations.

For large quantities: Collect and dispose of using suitable equipment. Dispose of the collected material in accordance with regulations. Avoid generating dust. Use non-sparking tools.

6.4 Reference to other sections

For information on safe handling, see Section 7 For information on

personal protective equipment, see Section 8 For information on

disposal, see Section 13

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7 HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Guidance on safe handling

Avoid dust formation. Wear suitable protective clothing and safety goggles/face protection when working. Avoid inhaling dusts/mists/vapours. When transferring large quantities without an extraction system: wear respiratory protection.

7.1.2 Fire and explosion safety instructions

Take measures to prevent electrostatic charging – keep away from sources of ignition – provide fire extinguishers. Keep away from sources of ignition – no smoking. Dust may form an explosive mixture with air. Avoid the formation of dust. Dust in sufficient concentrations forms an explosive mixture with air. Minimise dust formation; remove open flames and other ignition sources. Good housekeeping should be practised in daily work to ensure that dust does not accumulate on surfaces. Dry powder may become statically charged due to friction during transfer and mixing. Provide appropriate protective measures, such as electrical earthing and bonding, or an inert gas atmosphere.

Dust explosion class 1 (Kst value >0 to 200 bar m s⁻¹).

7.1.3 Guidance on general hygiene measures

Do not eat, drink or smoke whilst working.

7.2 Conditions for safe storage, taking incompatibilities into account

7.2.1 Requirements for storage rooms and containers

Suitable materials for containers: high-density polyethylene (HDPE)

Further information on storage conditions: Store only in the original container in a cool, well-ventilated place, away from sources of ignition, heat or flames. Protect from direct sunlight.

7.2.2 Storage compatibility

Not specified

7.2.3 Further information on storage conditions

Store only in the original container in a cool, well-ventilated place, away from sources of ignition, heat or flames. Protect from direct sunlight. The substance/product is prone to caking at higher temperatures/pressures.

Do not allow temperature to exceed: 40 °C

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7.2.4 Storage class

Storage class according to TRGS 510 (formerly VCI, Germany): (11) Flammable solids

8 EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

8.1 Parameters to be monitored

Components with occupational exposure limits:

In order to assess the effectiveness of protective measures, such as ventilation, or the need for respiratory protection, it may be necessary to carry out metrological monitoring of the workplace. As this requires specialist expertise, only accredited testing laboratories should be commissioned for this purpose. With regard to suitable monitoring procedures for determining exposure, the European standards EN 482, 689 and 14042 must be applied. In addition, TRGS 402 must be observed in Germany.

7631-86-9: Silicon dioxide

AGW 4 mg/m³ (TRGS 900 (DE)), respirable fraction, applies to colloidal silica (CAS No. 7631-89-9) including pyrogenic silica and silica produced by the wet process (precipitated silica, silica gel)

8.2 Exposure control and monitoring

8.2.1 Appropriate engineering controls

Engineering controls and the use of appropriate work practices take precedence over the use of personal protective equipment. Ensure good ventilation. This can be achieved by local exhaust ventilation or general exhaust ventilation.

8.2.2 General protection and hygiene measures

Avoid inhaling dust. In addition to the information on personal protective equipment, the wearing of closed work clothing is required. Avoid exposure

- Obtain specific instructions before use. Observe the usual precautions when handling chemical building materials. Do not eat, drink or smoke whilst using the product. Wash hands and/or face before breaks and at the end of work. Ensure skin cleansing and care after work. Gloves must be checked regularly and before use. They must be replaced if necessary (e.g. small leaks).

8.2.3 Respiratory protection

Respiratory protection in poorly ventilated areas. Particle filters with low retention efficiency for solid particles (e.g. EN 143 or 149, type P1 or FFP1)

8.2.4 Skin protection

Impermeable gloves, light protective clothing

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8.2.5 Eye protection

Safety goggles with side protection (framed goggles) (e.g. EN 166)

8.3 Limitation and monitoring of environmental exposure

8.3.1 Air

Information on limiting and monitoring environmental exposure can be found in Section 6.

8.3.2 Water

Information on limiting and monitoring environmental exposure can be found in Section 6.

8.3.3 Soil

Information on limiting and monitoring environmental exposure can be found in Section 6.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Powder, yellowish to brownish
Odour	Characteristic
Melting point	Cannot be determined; substance/product decomposes.
Boiling point	Not applicable
Flash point	Not applicable
Spontaneous combustion	Temperature: 155 °C. The product has not been tested. The statement has been derived from substances/products of similar structure or composition. Data for powdered solid. The substance does not ignite spontaneously up to the specified temperature. (Test type: Spontaneous ignition at elevated temperature, Method: VDI 2263, Sheet 1, 1.4.2)
Explosion hazard	Lower explosion limit: 40 g/m ³ , analogous to a product of similar composition.
Density	Bulk density approx. 300–600 kg/m ³
Solubility in water	Soluble (20 °C)
Organic solvents	Not determined
Solid content	100 %
Other information	Minimum ignition energy: 30–100 mJ Inductance: 1 mH
Particle size distribution	< 250 µm

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10 STABILITY AND REACTIVITY

10.1 Reactivity

No hazardous reactions occur provided the storage and handling instructions are followed,

Does not corrode metal.

10.2 Chemical stability

The product is stable provided the instructions for storage and handling are followed.

10.3 Possibility of hazardous reactions

The product is stable provided the storage and handling instructions are followed.

10.4 Conditions to avoid

See SDS Section 7 – Handling and storage.

10.5 Incompatible materials

Strong acids, strong bases, strong oxidising agents, strong reducing agents

10.6 Hazardous decomposition products

No hazardous decomposition products provided that the storage and handling instructions are followed

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Practically non-toxic following a single oral dose. Based on the available data, the classification criteria are not met.

11.1.2 Primary irritant

effect On the skin

No irritation is expected when used as intended and handled properly. Based on the available data, the classification criteria are not met.

To the eyes

No irritation is expected when used as intended and handled properly. Based on the available data, the classification criteria are not met.

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11.1.3 Sensitisation

Based on the available data, the classification criteria are not met.

11.1.4 Mutagenicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.5 Carcinogenicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.6 Reproductive toxicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.7 Additional toxicological information

Developmental toxicity:

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

Specific target organ toxicity (single exposure):

Based on the available data, the classification criteria are not met.

Repeated-dose toxicity and specific target organ toxicity (repeated exposure):

No evaluable studies on toxicity following repeated administration are available. Based on the available data, the classification criteria are not met.

Aspiration hazard:

No aspiration hazard is to be expected.

In our experience and according to the information available, the product does not cause any adverse health effects when handled and used correctly. The product has not been tested. The toxicological statements have been derived from the properties of the individual components.

12 ENVIRONMENTAL INFORMATION

12.1 Toxicity

Assessment of aquatic toxicity:

Based on the available data, the classification criteria are not met. Highly unlikely to be acutely harmful to aquatic organisms.

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12.2 Persistence and degradability

Potentially biodegradable. The insoluble fraction can be mechanically separated in suitable sewage treatment plants. The polymeric fraction of the product is difficult to biodegrade.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in the soil

No data available.

12.5 Results of the PBT and vPvB assessment

The product does not meet the criteria for PBT (persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6 Other adverse effects

The product does not contain any substances listed in Annex I of Regulation (EC) No 2037/2000 on substances that deplete the ozone layer.

Other ecotoxicological information:

Do not allow the product to enter the environment uncontrolled. The product has not been tested.

The ecotoxicological statements have been derived from the properties of the individual components.

13 DISPOSAL INFORMATION

13.1 Waste treatment procedures

13.1.1 Recommendation

National and local legal regulations must be observed. Residual quantities must be disposed of in the same way as the substance/product.

13.1.2 Waste code according to the European Waste Catalogue

Not specified

13.1.3 Uncleaned packaging

Contaminated packaging must be emptied as thoroughly as possible. It can then be recycled after appropriate cleaning.

14 TRANSPORT INFORMATION

Not classified as a dangerous good under transport regulations (ADR, RID, ADN, IMDG, IATA/ICAO)

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14.1 UN number

Not applicable

14.2 Proper UN shipping name

Not applicable

14.3 Transport hazard classes

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for users

None known

14.7 Carriage of bulk cargo in accordance with Annex II of the MARPOL 73/78 Convention and the IBC Code

Not assessed

15 LEGISLATION

15.1 Regulations on safety, health and environmental protection / specific legal provisions for the substance or mixture

15.1.1 EU regulations

Not specified

15.1.2 National regulations

Water hazard class (Annex 4 of the VwVwS (Germany)): (1) Slightly hazardous to water.

15.1.3 Other regulations, restrictions and prohibitions

None known

15.2 Chemical safety assessment

Chemical safety assessment not required

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16 OTHER INFORMATION

16.1 General

The information provided in this safety data sheet is based on our current knowledge and experience and describes the product in terms of safety requirements. This information is in no way to be regarded as a certificate of analysis, a technical data sheet or a description of the product's properties (product specification). An agreed quality or the suitability of the product for a specific application cannot be inferred from the identified uses stated in the safety data sheet. The recipient of our product is responsible for observing any intellectual property rights as well as existing laws and regulations.

16.2 Wording of the hazard statements (in accordance with Regulation (EC) No 1272/2008) referred to in sections 2 and 3

Flam. Liq. 2 [H225] – Flammable liquids, Category 2: Liquid and vapour highly flammable

Flam. Liq. 3 [H226] – Flammable liquids, Category 3: Liquid and vapour are flammable Flam. Sol. 2

[H228] – Flammable solids, Category 2: Flammable solid

Met. Corr. 1 H290] – Substances or mixtures corrosive to metals: May be corrosive to metals

Acute Tox. 3 [H301] – Acute toxicity category 3: Toxic if swallowed

Acute Tox. 4 [H302] – Acute toxicity category 4: Harmful if swallowed

Asp. Tox. 1 [H304] – Aspiration hazard Category 1: May be fatal if swallowed and enters the respiratory tract

Acute Tox. 4 [H312] – Acute toxicity category 4: Harmful in contact with skin

Skin. Corr. 1A [H314] – Skin corrosion / Skin irritation Category 1A: Causes severe skin burns and serious eye damage

Skin. Irrit 2 [H315] – Skin corrosion / skin irritation Category 2: Causes skin irritation

Skin Sens. 1 [H317] – Skin sensitisation Category 1: May cause allergic skin reactions

Eye Dam. 1 [H318] – Serious eye damage/eye irritation Category 1: Causes serious eye damage

Acute Tox. 3 [H330] – Acute toxicity category 3: Life-threatening if inhaled

Acute Tox. 3 [H331] – Acute toxicity category 3: Toxic if inhaled

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Acute Tox. 4 [H332] – Acute toxicity Category 4: Harmful if inhaled

STOT SE 3 [H336] – Specific target organ toxicity (single exposure) Category 3: May cause drowsiness and dizziness

STOT RE 2 [H373] – Specific target organ toxicity (repeated exposure) Category 2: May cause damage to organs through prolonged or repeated exposure (following prolonged or repeated inhalation/skin contact/ingestion)

Aquatic Acute 1 [H400] – Hazardous to aquatic life, Category 1: Very toxic to aquatic organisms

Aquatic Chronic 2 [H411] – Chronically hazardous to the aquatic environment, Category 2: Toxic to aquatic organisms with long-term effects

16.3 Abbreviations and acronyms

[ADR] International Regulations concerning the Transport of Dangerous Goods by Rail [AGW] Occupational Exposure Limit
[AwSV] Ordinance on Installations for Handling Substances Hazardous to Water
[BGR] Occupational Safety and Health Association Regulation
[BimSchV] Ordinance on the Implementation of the Federal Immission Control Act [CAS] Chemical Abstracts Service
[DIN] Standard of the German Institute for Standardisation [EC] Effective concentration
[EC] European Community
[EINECS] European Inventory of Existing Commercial Chemical Substances [EN] European Standard
[GHS] Globally Harmonised System of Classification and Labelling of Chemicals
[IATA-DGR] International Air Transport Association Dangerous Goods Regulations
[IBC Code] International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
[ICAO-TI] International Civil Aviation Organization Technical Instructions
[IMDG Code] International Maritime Dangerous Goods Code
[ISO] Standard of the International Organization for Standardization
[IUCLID] International Uniform Chemical Information Database
[LC] Lethal concentration
[LD] Lethal Dose
[log Kow] Partition coefficient between octanol and water
[MARPOL] Maritime Pollution Convention = Convention for the Prevention of Marine Pollution by Ships
[OECD] Organisation for Economic Co-operation and Development
[PBT] Persistent, bioaccumulative, toxic
[REACH] Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) No 1907/2006)
[RID] International Regulations concerning the Carriage of Dangerous Goods by Rail
[SDS] Safety Data Sheet
[STOT] Specific target organ toxicity [TRGS] Technical Rules for Hazardous Substances
[UN] United Nations
[VOC] Volatile Organic Compounds
[vPvB] very persistent and very bioaccumulative [VwVwS] Administrative Regulation on Substances Hazardous to Water

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[WGK] Water Hazard Class