

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1 Product identifier

Trade name: TEGNO

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

The product is a hydraulic binder for concretes and mortars.

### 1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier:

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

### 1.4 Emergency telephone number

Not available

## 2 HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture according to Regulation (EC) No

#### 2.2 1272/2008 [CLP]

Eye Dam. 1 (H318); Skin Irrit. 2 (H315); STOT SE 3 (H335); Skin Sens. 1 (H317); STOT RE 2 (H373)

For classifications not written out in full in this section, the full text is given in section 16.

### 2.3 Label elements according to Regulation (EC) No

#### 2.4 1272/2008 [CLP/GHS]

##### 2.4.1 Hazard pictograms and signal word

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)



GHS05



GHS07



GHS08

DANGER

#### 2.4.2 Hazard-determining components for labeling

Portland cement, calcium hydroxide

#### 2.4.3 Hazard statements

[H318] Causes serious eye damage

[H315] Causes skin irritation

[ H335 ] May cause respiratory irritation

[ H373 ] May cause damage to the lungs through prolonged or repeated exposure if inhaled.

#### 2.4.4 Precautionary statements

[P102] Keep out of the reach of children

[P103] Read label before use

[P280] Wear protective gloves / protective clothing / eye protection / face protection

[ P271 ] Use only outdoors or in a well-ventilated area.

[P302 + P352 + P333 + P313] IF ON SKIN: Wash with plenty of soap and water

[P305 + P351 + P338 + P310] IF IN EYES: Rinse cautiously with water for several minutes. Remove any existing contact lenses if possible. Continue rinsing. Immediately call a POISON CENTER or physician.

[P261 + P304 + P340 + P312] Avoid breathing dust. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, call a POISON CENTER or doctor.

[P332 + P313] If skin irritation occurs, get medical advice / attention

[P101] If medical advice is needed, have product container or label at hand

[P362] Remove contaminated clothing and wash before reuse

[P501] Move contents / container to suitable waste collection points

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 2.5 Supplemental Hazard information

The product contains chromate reducer, which means that the content of water-soluble chromium(VI) is less than 0.0002 %. However, in case of improper storage (exposure to moisture) or over storage, the contained chromate reducer may lose its effectiveness prematurely and there may be a sensitising effect of the cement on skin contact (H317 or EUH203).

The product does not meet the criteria for classification as PBT or vPvB.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

This product is a mixture.

### 3.2 Mixtures

#### 3.2.1 Composition/information on ingredients

Binder premix for the production of ultra-high performance concretes

#### 3.2.2 Hazardous ingredients

Portland cement 15-95% (CAS: 65997-15-1; EINECS: 266-043-4) - Classification according to Regulation (EC) No 1272/2008: Eye Dam. 1 (H318); Skin Irrit. 2 (H315); STOT SE 3 (H335); Skin Sens. 1 (H317)

Quartz flour approx. 41% (CAS: 14808-60-7; EINECS: 238-878-4) - Classification according to Regulation (EC) No 1272/2008: STOT RE 2 (H373)

For the wording of the listed risk phrases refer to section 16.

## 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

#### 4.1.1 General information

No special personal protective equipment is required for first responders. However, first responders should avoid contact with wet product.

Remove contaminated clothing immediately.

If health problems occur, consult a doctor.

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

#### 4.1.2 Following skin contact

Remove dry powder and rinse with plenty of water. Rinse off fresh mortar mixed with water with plenty of water. Remove soaked clothing, shoes, watches etc.. Clean these thoroughly before reuse. Consult a doctor in case of skin complaints.

#### 4.1.3 Following eye contact

Do not rub eye dry, because additional corneal damage is possible due to mechanical stress. If necessary, remove contact lens and immediately rinse the eye under running water for at least 20 minutes with the eyelid open to remove all particles. If possible, use isotonic eye rinsing solution (0.9% NaCl). Always consult occupational physician or ophthalmologist.

#### 4.1.4 Following inhalation

Provide fresh air. Dust from throat and nasal area should be removed quickly. Consult a physician if symptoms such as malaise, coughing or persistent irritation occur.

#### 4.1.5 Following ingestion

Do not induce vomiting. If conscious, rinse mouth and drink plenty of water. Consult physician or poison control center.

### 4.2 Most important symptoms and effects, both acute and delayed

**EYES:** Eye contact with the product (dry or wet) may cause serious and possibly permanent eye damage.

**SKIN:** Product may have an irritating effect on moist skin (as a result of perspiration or moisture in the air) through prolonged contact. Contact between cement dust and damp skin may cause skin irritation, dermatitis or serious skin damage. Allergic chromate dermatitis may develop with prolonged contact due to the water-soluble chromate contained in the cement.

**INHALATION:** Repeated inhalation of large amounts of dust over a prolonged period of time increases the risk of lung disease.

**ENVIRONMENT:** Under normal use, the product is not hazardous to the environment.

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

If a doctor is consulted, please present this safety data sheet.

## 5 FIREFIGHTING MEASURES

### 5.1 Extinguishing media

The product is neither flammable when delivered nor when mixed ready for use. Extinguishing media and firefighting measures must be adapted to the surrounding fire.

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 5.2 Special hazards arising from the substance or mixture

The product is neither explosive nor flammable and does not oxidize any other materials.

## 5.3 Firefighting measures

No special measures required as the product does not pose a fire-relevant hazard.

## 6 ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid skin and eye contact. Ensure adequate ventilation. Do not inhale dust.

### 6.2 Environmental precautions

Do not allow to enter drains, groundwater, surface water or soil.

### 6.3 Methods and material for containment and cleaning up

Pick up and use spilled product mechanically. Never use compressed air for cleaning. If dust is generated during dry cleaning, personal protective equipment must be used. Avoid inhalation of dust and skin contact. Pour spilled material back into container. It is possible to use the material at a later date.

### 6.4 Reference to other sections

See section 7 for safe handling information

See section 8 for personal protection information

See section 13 for Information on disposal

## 7 HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### 7.1.1 Advice on safe handling

Avoid formation of dust.

Avoid contact with skin and eyes.

#### 7.1.2 Fire preventions

No special actions required.

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

### 7.1.3 Advice on general occupational hygiene

Do not eat, drink or smoke while working. In dusty atmosphere wear respirator and safety goggles. Wear protective gloves to avoid skin contact.

## 7.2 Conditions for safe storage, including any incompatibilities

### 7.2.1 Requirements for storage rooms and vessels

Keep only in unopened original container. Keep container tightly closed.

### 7.2.2 Hints on storage assembly

Do not store together with acids.

### 7.2.3 Further information on storage conditions

It is essential to observe the manufacturer's instructions on storage conditions and shelf life. In case of improper storage (moisture ingress) or overstorage, the effect of a possibly contained chromate reducer may decrease and sensitization by skin contact cannot be excluded.

### 7.2.4 Storage class

VCI storage class: 13. Non-combustible solid material. GISCODE ZP1

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

General dust limit value AGW 1.25 mg/m<sup>3</sup> (alveolar fraction); AGW 10 mg/m<sup>3</sup> (inhalable fraction).

The exposure limit values are taken from the TRGS 900 valid at the time of preparation.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Technical measures and the application of appropriate working methods take precedence over the use of personal protective equipment. Ensure good ventilation. This can be achieved by local exhaust or general exhaust air.

#### 8.2.2 General protection and hygiene measures

Keep away from food, drink and animal feeding stuffs. Remove contaminated, soaked clothing immediately. Do not breathe dust/fume/mist. Avoid contact with eyes and skin. Do not eat, drink, smoke, snort while working. Ensure thorough skin cleansing after work and before breaks. Preventive skin protection with skin protection ointment. Use a moisturizing skin cream after work.

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 8.2.3 Respiratory protection

If the exposure limits are exceeded (e.g. during open handling of powdery product), a suitable respiratory protection mask must be used (e.g. according to EN 149, EN 140, EN 14387, EN 1827). As a rule, particle-filtering half masks of type FFP1 or FFP2 are to be used (see table). General information can be found in BGR/GUV-R 190).

## 8.2.4 Skin protection

Wear waterproof, abrasion and alkali-resistant protective gloves. Suitable gloves include nitrile-impregnated cotton gloves with CE mark (see BGR 195). Observe maximum wearing time. Leather gloves are not suitable due to their water permeability and may release chromate-containing compounds. Wear boots and long-sleeved clothing and use skin protection products. BRG 189 "Rules for the use of protective clothing" must be observed.

## 8.2.5 Eye / Face protection

In case of dust formation or splash hazard, use tight-fitting safety goggles. BGR 192 "Rules for the use of eye and face protection" must be observed.

## 8.3 Environmental exposure controls

### 8.3.1 Air

Compliance with dust emission limits according to the Technical Instructions on Air Quality Control.

### 8.3.2 Water

Do not allow cement or cement-containing mixture to enter groundwater or sewage system. Exposure may cause an increase in pH. Ecotoxicological effects may occur if the pH value exceeds 9. Therefore, water discharged into the sewage system or surface water or runoff must not lead to a corresponding pH value. Waste water and groundwater regulations must be observed.

### 8.3.3 Soil

Compliance with the Federal Soil Protection Ordinance. No special control measures required.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties	_____	White or grey powder
Odour	_____	Odourless
Melting point/freezing point	_____	> 1250 °C
Initial boiling point/boiling range	_____	Not determined
Flash point	_____	Not determined
Flammability (solid, gas)	_____	The product is not self-igniting.
Risk of explosion	_____	The product is not explosive.
Density	_____	2.75-3.20 g/cm <sup>3</sup> ; Bulk density: 0.9-1.5 g/cm <sup>3</sup>
Solubility in water	_____	Low solubility (0.1-1.5 g/l at 20°C)
Organic solvents	_____	0,0 %
Solids content	_____	100 %

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

Other Information \_\_\_\_\_ No further relevant information available

## 10 STABILITY AND REACTIVITY

### 10.1 Reactivity

The cement contained in the mixture is a hydraulically setting substance. In contact with water, an intentional reaction takes place. In the process, the cement hardens and forms a solid mass that does not react with its surroundings.

### 10.2 Chemical stability

The product is stable as long as it is stored properly and dry (section 7). Avoid contact with incompatible materials. When wet, the product is alkaline and incompatible with acids, ammonium salts, aluminum and other base metals. Hydrogen may be formed. Portland cement contained in the mixture is soluble in hydrofluoric acid, forming corrosive silicon tetrafluoride gas. Avoid contact with these incompatible materials. With water, Portland cement forms calcium silicate hydrates, calcium aluminate hydrates and calcium hydroxide. The calcium silicates may react with strong oxidizing agents such as fluorides.

### 10.3 Possibility of hazardous reactions

Avoid contact with incompatible materials.

### 10.4 Conditions to avoid

Moisture ingress during storage can lead to lumping and loss of product quality.

### 10.5 Incompatible materials

Acids, ammonium salts, aluminum or other base metals

### 10.6 Hazardous decomposition products

The product does not decompose into hazardous components.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### 11.1.1 Acute toxicity

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

#### 11.1.2 Primary irritant effect

##### On the skin

The cement contained in the mixture has a skin and mucous membrane irritant effect. The dry product in contact with wet skin or skin contact with the wet or moist product may cause various



Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

irritant and inflammatory reactions of the skin, e.g. reddening and cracking. Prolonged contact in connection with mechanical abrasion may cause serious skin damage.

### **At the eye**

Direct contact with the product may cause corneal damage, firstly due to the mechanical action and secondly due to immediate or subsequent irritation or inflammation. Direct contact with the dry product or splashes of the product mixed with water can have effects ranging from moderate eye irritation (e.g. conjunctivitis or eyelid rim inflammation) to serious eye damage and blindness.

#### **11.1.3 Sensitisation to the respiratory tract/skin**

Individuals may develop skin eczema after contact with the dry product or the product mixed with water. These are triggered either by the pH value (irritant contact dermatitis) or by immunological reactions with water-soluble chromium(VI) (allergic contact dermatitis). However, immunological reactions cannot be excluded only if the expiration date of the product is exceeded (see section 2.3). There is no evidence of sensitization of the respiratory tract.

#### **11.1.4 Germ cell mutagenicity**

There is no evidence of germ cell mutagenicity. Based on available data, the classification criteria are not considered to be met.

#### **11.1.5 Carcinogenicity**

Not tested

#### **11.1.6 Reproductive toxicity**

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

#### **11.1.7 Other toxicity information**

Long-term exposure to respirable cement dust above the occupational exposure limit may cause coughing, shortness of breath and chronic obstructive changes of the respiratory tract. No chronic effects were observed at low concentrations.

This product contains between 1 and 10% alveolar quartz and is classified as STOT RE2 according to the criteria defined in Regulation (EC) No 1272/2008. Prolonged and/or intense exposure to dust containing alveolar silica may cause silicosis.

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

The product is not hazardous to the environment. However, the release of larger quantities into water may cause an increase in pH and thus be toxic to aquatic life under special circumstances.

### **12.2 Persistence and degradability**

Not applicable, as it is an inorganic mineral material. Portland cement residues left behind during hydration do not pose a toxicological risk.

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 12.3 Bioaccumulative potential

Not applicable, as it is an inorganic mineral material. Portland cement residues left behind during hydration do not pose a toxicological risk.

## 12.4 Mobility in soil

Not applicable, as it is an inorganic mineral material. Portland cement residues left behind during hydration do not pose a toxicological risk.

## 12.5 Results of PBT and vPvB assessment

Not applicable, as it is an inorganic mineral material. Portland cement residues left behind during hydration do not pose a toxicological risk.

## 12.6 Other adverse effects

Not applicable

## 13 DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### 13.1.1 Recommendation

Take up spilled material dry and, if possible, reuse / recycle. Waste recycling techniques are not required. Mix contaminated material with water and allow to harden. Disposal according to official regulations. Must not be disposed of together with household garbage. Do not dispose into waste water or surface water. Do not empty into drains.

#### 13.1.2 Waste codes / waste designations according to EWC / AVV

17 01 01 concrete

#### 13.1.3 Uncleaned packaging

Disposal according to official regulations.

## 14 TRANSPORT INFORMATION

The product is not subject to the International Dangerous Goods Regulations (IMDG, IATA, ADR / RID). Therefore, no dangerous goods classification is required.

### 14.1 UN No.

Not applicable

### 14.2 UN Proper shipping name

Not applicable

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

## 14.3 Transport hazard class(es)

Not applicable

## 14.4 Packing group

Not applicable

## 14.5 Environmental hazards

Not applicable

## 14.6 Special precautions for user

Not applicable

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# 15 REGULATORY INFORMATION

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

### 15.1.1 EU regulations

Directive 2012/18 / EU, Named dangerous substances - ANNEX I: None of the ingredients is included.

### 15.1.2 National regulations

Ordinance on Protection against Hazardous Substances (Gef-StoffV)

Chemicals Prohibition Ordinance (ChemVerbotsV)

Ordinance on the European Waste List (Waste List Ordinance - AVV)

Federal Soil Protection Act (BBodSchG)

Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV)

Technical Instructions on Air Quality Control (TA Luft)

Water hazard class: WGK 1 (Self-classification according to VwVwS, Annex 4): slightly hazardous to water.

GISCODE: ZP1 Cementitious products, low in chromate

Relevant TRGS: TRGS 200, TRGS 500, TRGS 510, TRGS 900

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

VCI storage class: storage class 13 (non-flammable solids) according to TRGS 510

### 15.1.3 Other regulations, restrictions and prohibition regulations

Relevant rules (BGR) of the German Social Accident Insurance (GUV):

BGR/GUV190 "Rules for the use of respiratory protective equipment"

BGR 192 "Rules for the use of eye and face protection"

BGR 189 "Rules for the use of protective clothing"

BGR 195 "Rules for the use of protective gloves"

### 15.2 Chemical Safety Assessment

A chemical safety assessment was not carried out.

## 16 OTHER INFORMATION

### 16.1 Basics

All information is based on the current state of our knowledge, but this does not constitute an assurance of product properties and does not establish a contractual relationship.

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

Flam. Liq. 2 [H225] - Flammable liquids Category 2: Highly flammable liquid and vapor

Flam. Liq. 3 [H226] - Flammable liquids Category 3: Flammable liquid and vapor

Flam. Sol. 2 [H228] - Flammable solids Category 2: Flammable solid

Met. Corr. 1 [H290] - Substances or compounds 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 airways

Acute Tox. 4 [H312] - Acute toxicity Category 4: Harmful in contact with skin

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

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

Skin Sens. 1 [H317] - Skin Sensitization Category 1: May cause an allergic skin reaction

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

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

Acute Tox. 3 [H330] - Acute toxicity Category 3: Fatal if inhaled

Acute Tox. 3 [H331] - Acute toxicity Category 3: Toxic if inhaled

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 or dizziness

Repr. 2 [H361f] - Suspected of damaging fertility

Aquatic Acute 1 [H400] - Hazardous to the aquatic environment Category 1: Very toxic to aquatic life

Aquatic Chronic 2 [H411] - Chronic Hazardous to the aquatic environment Category 2: Toxic for Aquatic organisms with long-term effects

Aquatic Chronic [ H412 ] - Harmful to aquatic organisms, with long-term effects

Aquatic Chronic [ H413 ] – May cause long-lasting harmful effects to aquatic life

### 16.3 Abbreviations and acronyms

[ ADR ] .... Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

[ AGW ] .... Arbeitsplatzgrenzwert

[ AwSV ] .... Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

[ BGR ] .... Berufsgenossenschaftliche Regel

[ BimSchV ] .... Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes

[ CAS ] .... Chemical Abstracts Service

[ DIN ] .... Norm des Deutschen Instituts für Normung

[ EC ] .... Effektive Konzentration

[ EG ] .... Europäische Gemeinschaft

[ EINECS ] .... European Inventory of Existing Commercial chemical Substances

[ EN ] .... Europäische Norm

[ GHS ] .... Globally Harmonized System of Classification and Labelling of Chemicals

[ IATA-DGR ] .... International Air Transport Association-Dangerous Goods Regulations

[ IBC-Code ] .... Internationaler Code für den Bau und die Ausrüstung von Schiffen zur Beförderung gefährlicher Chemikalien als Massengut

[ ICAO-TI ] .... International Civil Aviation Organization-Technical Instructions

[ IMDG-Code ] .... International Maritime Code for Dangerous Goods

[ ISO ] .... Norm der International Standards Organization

[ IUCLID ] .... International Uniform Chemical Information Database

[ LC ] .... Letale Konzentration

[ LD ] .... Letale Dosis

[ log Kow ] .... Verteilungskoeffizient zwischen Oktanol und Wasser

[ MARPOL ] .... Maritime Pollution Convention = Übereinkommen zur Verhütung der Meeresverschmutzung durch Schiffe

[ OECD ] .... Organisation for Economic Co-operation and Development

[ PBT ] .... Persistent, biakkumulierbar, toxisch

Trade name: **TEGNO**

Effective date: 11/4/2022

Version: 2.1 (replaces all previous versions)

[ REACH ] .... Registration, Evaluation and Authorisation of Chemicals (Verordnung (EG) 1907/2006)

[ RID ] .... Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Ordnung für die internationale Eisenbahnbeförderung gefährlicher Güter)

[ SDB ] .... Sicherheitsdatenblatt

[ STOT ] .... Specific target organ toxicity (spezifische Zielorgantoxizität)

[ TRGS ] .... Technische Regeln für Gefahrstoffe

[ UN ] .... United Nations (Vereinte Nationen)

[ VOC ] .... Volatile Organic Compounds (flüchtige organische Verbindungen)

[ vPvB ] .... very persistent and very bioaccumulative (sehr persistent und sehr bioakkumulierbar)

[ VwVwS ] .... Verwaltungsvorschrift wassergefährdender Stoffe

[ WGK ] .... Wassergefährdungsklasse