

Reefscaper / Reef & coral glue

Version number: GHS 1.0

Date of creation: 07.09.2020

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

1.1 Product identifier

Name of the substance	Natural quick-setting cement Standard NF
Trade name	Reefscaper / Reef & coral glue
Registration number (REACH)	-----
EC number	-----
CAS number	-----
Other designations	
Product number	RSCAPE

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

Relevant identified uses	Cement for corals and decorative materials in Aquariums CNP PM NF Cement designated as natural rapid cement according to standard NF P 15-314 or natural rapid cement according to European Technical Approval ETA-07/0019, also according to standard NF P 15-317 Cement for working near the sea. The identified uses of cement and cementitious preparations refer to dry products and products in wet suspensions (glue). Uses by consumers
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1.3 Details of the supplier of the safety data sheet

ARKA Biotechnologie GmbH
Mühlach 53-55 90552
Röthenbach Germany

Phone: +49 (0)911 5698610 00
Fax: +49 (0)911 5698610 29
eml

info@arka-biotech.de

1.4 Emergency number

Emergency information service

Poison control center Munich
Available by phone: 24h / 7 days Phone: +49 (0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance

Classification according to Regulation (EC) No. 1272/2008 (CLP)

Hazard class	Category	Hazard class and category	Hazard warning
Skin irritation	Cat. 2	(Skin Irrit. 2)	H315
serious eye damage / eye irritation	Cat. 1	(Eye Dam. 1)	H318
STOT SE: Target organ toxicant (single exposure) Respiratory tract irritation	Cat. 3	(STOT SE 3)	H335

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Notes

Natural CNP PM NF fast-setting cement is naturally low in chromate.

2.2 Labeling elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP)

Signal **word**Danger

Pictograms

GHS05, GHS07



Hazard warnings

H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Safety instructions

Precautionary measures

P102: Keep out of the reach of children.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338+P310: In case of contact with eyes: Rinse cautiously with water for several minutes. Remove any contact lenses if possible. Continue rinsing. If you feel unwell, call a POISON CENTER or doctor.

P302+P352+P333+P313: In case of contact with skin: wash with plenty of soap and water. If skin irritation or rash occurs, seek medical advice.

P261+P304+P340+P312: Avoid breathing dust. If inhaled: Remove the affected person to fresh air. Move affected person to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, call a POISON CENTER or doctor.

Safety instructions - Disposal

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

Hazardous ingredients for labeling: Portland cement

2.3 Other dangers

CNP Naturschnellzement does not fulfill the criteria for PBT or vPvB substances according to Annex XIII of the REACH Regulation (EC Regulation No. 1907 / 2004 / EC).

SECTION 3: Composition/information on ingredients

3.1 Substances

Natural rapid cement with fast bonding and hardening is produced exclusively by firing clay-limestone with a uniform composition, which is extracted from homogeneous rock layers, fired at moderate temperatures (1000 to 1200 °C) and then very finely ground. It is mainly composed of tricalcium silicate (3CaO.SiO₂) (CAS: 12168-85-3, EINECS: 235-336-9), dicalcium silicate (2CaO.SiO₂) (CAS: 10034-77-2, EINECS: 233-107-8), tricalcium aluminate (3CaO.Al₂O₃) (CAS: 12042-78-3, EINECS: 234-932-6) and calcium ferroaluminate (4CaO. Al₂O₃.Fe₂O₃) (CAS: 12068-35-8, EINECS: 235-094-4), calcite (CaCO₃) (CAS: 471-31-1, EINECS: 207-439-9), spurrite (Ca₅(SiO₄)₂(CO₃)) (CAS: 11140-12-8) and

as well as small amounts of calcium oxide, magnesium, sodium sulphate, potassium and calcium and traces of other elements. Natural quick-setting cement contains small amounts of insoluble substances in which free silica may be present (CAS: 14808-60-4; EINECS: 238-878-4). Natural CNP PM NF Rapid Cement fulfills the requirements of Directive 2003/53/CE and therefore does not require the addition of to reduce water-soluble chromium (VI).

Additional information:*

There is no separate CAS number for natural rapid cement (Roman cement). For this reason, although it is not a Portland cement clinker, the manufacturer has classified the substance as a natural rapid cement clinker with the CAS number 65997-15-1.

3.1.2 Ingredients that pose a health hazard*

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Substance name: natural rapid cement clinker
 content 100%
 CAS-No. 65997-15-1

EINECS-No. 266-043-4
 EC Index-No. ---

Classification Xi: R37/38-41
 Skin Irrit. 2: H315
 Eye Dam. 1: H318
 STOT SE 3: H335

3.2 Mixture

Not applicable.

SECTION 4: First aid measures

4.1 Description of first aid measures General

notes

No special personal protective equipment is required for first responders. However, first responders must avoid inhalation of dust from the mixture or contact with wet mixture or preparations containing the mixture (concrete, mortar, plaster, etc.). Where this is not possible, personal protective equipment should be worn as specified in Section 8.

Eye contact

Do not rub eyes to avoid possible corneal damage due to mechanical stress. Remove contact lenses if necessary. Tilt head towards injured eye, open eyelid(s) wide and immediately rinse eye(s) thoroughly under running water for at least 20 minutes to remove all particles. If possible, use isotonic eyewash (0.9% NaCl). Consult an occupational physician or ophthalmologist.

Skin contact

Remove dry cement and rinse with plenty of water. Wash wet cement from the skin with plenty of water, pH-neutral soap or a mild skin cleanser. Remove contaminated clothing, shoes, glasses and clean thoroughly before reuse. Consult a doctor in the event of skin irritation or burns.

Inhale

Move the affected person to fresh air. Dust from the throat and nose should be removed quickly. If irritation persists or if symptoms such as discomfort, coughing or other persistent symptoms occur, consult a doctor.

Ingestion

Do not induce vomiting. If conscious, rinse mouth and give plenty of water to drink. Immediately consult a doctor or poison control center.

4.2 Most important symptoms and effects, both acute and delayed Eyes:

On contact with the eyes, dust from the substance (dry or moist) may cause severe and possibly permanent irritation or injury.

Skin:

Cement may have an irritant effect on moist skin after prolonged contact (due to perspiration or humidity) or cause contact dermatitis after repeated contact.

Inhale:

Repeated inhalation of cement dust over a long period of time increases the risk of respiratory and lung diseases.

Ingestion:

If swallowed accidentally, cement can cause irritation or burns in the mouth, throat, esophagus or gastrointestinal tract.

4.3 Information on immediate medical assistance or special treatment

See information under point 4.1. If a doctor is consulted, please present this safety data sheet.

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SECTION 5: Fire-fighting measures

5.1 Extinguishing agent

Suitable extinguishing agents

Cement is not flammable. In the event of fire, use extinguishing agents suitable for the ambient conditions.

5.2 Special hazards arising from the substance or mixture

Cement is neither flammable nor explosive and does not have a flammable effect on other materials.

5.3 Instructions for firefighting

Cement does not pose a fire hazard. Therefore, no special protective equipment is required for firefighters. Do not allow extinguishing water to enter the sewage system or the environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Staff not trained for emergencies

Wear the protective clothing described in section 8. Follow the instructions for safe handling described in section 7.

Emergency services

Emergency measures are not required. However, in case of high dust exposure, eye, skin and respiratory protective equipment must be worn.

6.2 Environmental protection measures

Do not allow cement to enter the sewage system, drainage systems or bodies of water (e.g. rivers) by washing it away.

6.3 Methods and material for retention and cleaning

For cleaning, use dry methods such as vacuum cleaners or vacuum extraction (industrial portable devices with high-efficiency air filters or similar technologies) that do not generate dust. Never use compressed air for cleaning.

To avoid inhalation of cement or cementitious dust and contact with skin or eyes, ensure that workers wear appropriate personal protective equipment (see section 8). Place spilled material in a container for later use. If large quantities of cement or cementitious mixtures are spilled, close/cover all waste water pits in the immediate vicinity.

6.4 Reference to other sections

Further details can be found in sections 8 and 13.

SECTION 7: Handling and storage

7.1 Protective measures for safe handling

Recommendations

• Measures to prevent fires and the formation of aerosols and dust

For cleaning, use dry methods such as vacuum cleaners or vacuum extraction (industrial portable devices with high-efficiency air filters or similar techniques) that do not generate dust. Never use compressed air for cleaning. Only use in well ventilated areas. Avoid generating dust.

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Notes on general hygiene in the workplace

Wash hands after use. Do not eat, drink or smoke in areas where work is being carried out. Remove contaminated clothing and protective equipment before entering areas where food is eaten. Do not store food and drinks together with chemicals. Do not use containers for chemicals that are normally intended for holding food. Keep away from food, drinks and animal feed.

7.2 Conditions for safe storage, taking into account incompatibilities

Cement should be stored in watertight, dry (i.e. with minimized internal condensation) and clean conditions and protected from contamination. Cement can accumulate or build up in the walls of enclosed spaces where it is stored. Cement may be released unexpectedly, collapse or fall. Keep out of the reach of children. Keep away from acids. Store in tightly closed containers in a cool, dry and ventilated place. Avoid dust formation.

7.3 Specific end uses

See section 1.2 This product is assigned to GISCODE ZP 1 (Cementitious products, low chromate) (see section 15). Further information on safe handling, protective measures and rules of conduct can be found in GISCODE ZP 1. It is part of the hazard information system of the German Social Accident Insurance Institution for the construction industry at www.gisbau.de.

SECTION 8: Exposure controls/personal protective equipment

8.1 Parameters to be monitored

National limit values

Occupational exposure limits (occupational exposure limits)

Country	Working substance	Identifier	SMW [ppm]	SMW [mg/m ³]	KZW [ppm]	KZW [mg/m ³]	Source
EN	Dust	AGW		10		20	TRGS 900
EN	Dust	MAK		4			DFG
EN	Dust	AGW		1,25		2,4	TRGS 900
EN	Dust	MAK		0,3		2,4	DFG

Note

KZW Short-term value (limit value for short-term exposure): Limit value that should not be exceeded, unless otherwise specified, based on a duration of 15 minutes
 SMW shift mean value (limit value for long-term exposure): Time-weighted average value, measured or calculated for a reference period of eight hours

Relevant DNEL/DMEL/PNEC and other thresholds

• values relevant for human health

End point	Threshold value	Protection goal, exposure route
DNEL	1 mg/m ³	Human, inhalative

8.2 Exposure controls Appropriate engineering

controls General ventilation.

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Individual protective measures (personal protective equipment)

In plants where cement is handled, transported, loaded and unloaded, appropriate technical measures must be taken to protect the health of workers and to minimize the spread of dust in the working environment. Do not eat, drink or smoke during mixing or pouring operations to avoid contact with skin or mouth. Immediately after handling cement or cementitious products/mixtures, workers should wash or shower with a pH neutral soap or mild skin cleanser. Remove contaminated clothing, shoes, glasses / goggles etc. and clean thoroughly before reuse. In cases where personal protective equipment is required, use the following personal protective equipment (PPE):

Eye/face protection

When handling dry or wet cement and cementitious mixtures, wear appropriate approved goggles or safety glasses in accordance with EN 166 to avoid contact with the eyes.

Skin protection

Wear waterproof, abrasion-resistant and alkali-resistant protective gloves in accordance with EN 374 - Parts 1, 2 and 3. Use long-sleeved protective clothing, safety shoes or boots and skin protection products (including moisturizer) to protect the skin from prolonged contact with wet cement. Avoid kneeling in wet mortar.

Respiratory protection

If the dust exposure limit values are potentially exceeded, a suitable respirator must be worn. The type of respirator should be adapted to the level of dust exposure and comply with the relevant EN standard (UNI EN 149-certified particle-filtering half mask or UNI EN 140- certified quarter mask).

Limiting and monitoring environmental exposure

Use suitable containers to avoid contamination of the environment. Prevent from entering the sewage system or surface and ground water.

The effect on water and the risk assessment include the effect on organisms/ecosystems due to potential changes in pH associated with hydroxide discharges. The toxicity of other dissolved inorganic ions is considered negligible compared to the potential effect on pH.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties Appearance

Physical state	solid (powder)
color	beige/grey
odor	odorless

Other physical and chemical parameters

pH value	11 - 13.5 (20 °C) (water/solids ratio 1:2)
Melting point/freezing point	>1.000 °C
Initial boiling point and boiling	rangenot determined
Flash point	not applicable
Evaporation rate	not applicable
Flammability (solid, gas)	not flammable
Explosion limits of dust/air mixtures	not applicable
Vapor pressure	not applicable
Density	not determined
Bulk density	0.8 - 1.1 / ^g cm ³
Relative density	2.8 - 3.2 (air = 1)

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Solubility(ies)	
Water solubility	0.1 /g _l at 20 °C - 1.5 /g _l at 20 °C
Partition coefficient	
n-octanol/water (log KOW)	no information available
Auto-ignition temperature	not determined
Viscosity	not relevant (solid) none
Explosive properties	none
Oxidizing properties	

9.2 Other information

Particle size 5-30 µm.

SECTION 10: Stability and reactivity

10.1 Reactivity

When mixed with water, cement hardens and forms a solid mass that does not react with it in a normal environment.

10.2 Chemical stability

Cement in its present form is stable as long as it is stored properly (see section 7). It should be stored in a dry place. Avoid contact with incompatible materials. Wet cement is alkaline and incompatible with acids, ammonium salts, aluminum and other base metals. On contact with hydrofluoric acid, cement dissolves and forms silicate hydrates and calcium hydroxides. The silicates contained in the cement react with strong oxidizing agents such as fluorine, boron trifluoride, manganese trifluoride and oxygen difluoride. Undamaged packaging and compliance with the appropriate storage conditions in accordance with the specifications in subsection 7.2 enable the quality of the product to be maintained.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Moisture during storage can lead to lump formation and loss of product quality in the final mixture .

10.5 Incompatible materials

Wet cement is alkaline and incompatible with acids, ammonium salts, aluminum and other base metals. On contact with aluminum powder, wet cement causes the production of hydrogen.

10.6 Hazardous decomposition products

Cement does not decompose into hazardous components.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification according to GHS (1272/2008/EC, CLP) Acute toxicity

Is not to be classified as acutely toxic. **Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Sensitization of the respiratory tract or skin

Is not to be classified as an inhalation or skin allergen.

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Summary of the assessment of CMR properties

Is not classified as germ cell mutagenic (mutagenic), carcinogenic or toxic for reproduction.

Specific target organ toxicity (STOT)

- **Specific target organ toxicity at single exposure**

May irritate the respiratory tract.

- **Specific target organ toxicity with repeated exposure**

Shall not be classified as specific target organ toxicant (repeated exposure).

Aspiration hazard

Is not to be classified as an aspiration hazard.

Symptoms related to the physical, chemical and toxicological properties

- **In case of contact with the eyes**

Direct contact with cement may cause corneal damage due to mechanical action and immediate or delayed irritation or inflammation. Direct contact with large amounts of dry cement or splashes of wet cement can have effects ranging from moderate eye irritation (e.g. conjunctivitis or eyelid inflammation) to chemical burns and blindness

- **If inhaled**

Cement dust can irritate the throat and respiratory tract. Coughing, sneezing and shortness of breath can be the result if exposure is above the occupational exposure limits

- **In contact with the skin**

Cement in contact with moist skin may cause swelling or cracking of the skin. Prolonged contact in combination with mechanical abrasion may cause severe burns

Other information

Some people may experience eczema after contact with mixed cement, either due to the high pH causing irritant dermatitis or allergic dermatitis due to an immune reaction to soluble Cr (VI). Skin reactions range from mild erythema to more severe dermatitis. It is often difficult to make an accurate diagnosis. As natural CNP PM NF fast cement is naturally low in chromate, no sensitization should occur as long as the cement is handled and stored correctly.

SECTION 12: Environmental information

12.1 Toxicity

according to 1272/2008/EC: Not to be classified as hazardous to the aquatic environment. Water hazard class (WGK; Germany): 1 (slightly hazardous to water)

12.2 Persistence and degradability

No data is available.

12.3 Bioaccumulative potential

No data is available.

12.4 Mobility in soil

No data is available.

12.5 Results of the PBT and vPvB assessment

No data is available.

12.6 Other harmful effects

However, the addition of large quantities of cement to water can cause an increase in the pH value and can therefore be toxic to aquatic organisms under certain circumstances.

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SECTION 13: Disposal instructions

13.1 Waste treatment processes

Information relevant for waste treatment

Recycling/recovery of inorganic materials.

Information relevant for disposal via wastewater

Do not allow to enter drains. Avoid release to the environment. Get special instructions from- / consult safety data sheet.

Relevant legislation on waste Waste list

Remaining quantities:

Waste code AVV:10 13 06

Empty packaging:

Waste code AVV: 15 01 01

Waste code AVV: 15 01 05

Notes

Please observe the relevant national or regional regulations. Waste must be separated in such a way that it can be treated separately by the municipal or national waste disposal facilities.

SECTION 14: Transport information

Cement is not subject to a risk class according to the international regulations for the transportation of dangerous goods (IMDG/sea, ADR/road, RID/rail, ICAO/IATA/air transport). Apart from the information mentioned in section 8, no special precautions are required.

14.1 UN number	No dangerous goods as defined by national and international transport regulations (not subject to transportation regulations)
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard classes	
Class	Not applicable.
14.4 Packaging group	Not applicable.
14.5 Environmental hazards	Not applicable.
14.6 Special precautions for the user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable.

SECTION 15: Legislation

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

Relevant provisions of the European Union (EU)

• Restrictions according to REACH, Annex XVII

According to Annex XVII, point 47, of Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), as amended by Regulation No 552/2009, cement and cementitious mixtures may not be placed on the market or used if they contain more than 0.0002% (2 ppm) water-soluble chromium (VI) of the total dry weight of the cement after mixing with water. In view of the fact that cement does not contain more than 0.0002% (2 ppm) water-soluble chromium (VI) of the total dry weight of the cement after mixing with water, the mixture may be marketed without the addition of reducing agents.

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National regulations (Austria)

- **Ordinance on flammable liquids (VbF)**

VbF (group and hazard class): not applicable

Physical state: not liquid.

National regulations (Germany)

- **Ordinance on Installations for Handling Substances Hazardous to Water (AwSV)**

Water hazard class (WGK): 1 (slightly hazardous to water) - Classification according to Annex 1 (AwSV)

- **Technical Instructions on Air Quality Control (Germany)**

Number	Substance group	Class	Conc.	Mass flow	Mass concentration	Note
5.2.1	Total dust, including particulate matter		≥ 25 wt. %	0.2 kg/h	20 mg/m ³	2)

Note

2) Even if a mass flow rate of 0.20 kg/h is maintained or undercut, the mass concentration of 0.15 g/m³ must not be exceeded in the exhaust gas

- **Storage of hazardous substances in portable containers (TRGS 510) (Germany)**

Storage class (LGK): 13 (non-combustible solids)

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this substance.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of the abbreviations used
AGW	Occupational exposure limit
CAS	Chemical Abstracts Service (database of chemical compounds and their unique key, the CAS Registry Number)
CLP	Regulation (EC) No. 1272/2008 on classification, labeling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction (carcinogenic, mutagenic or toxic for reproduction)
DFG	German Research Foundation List of MAK and BAT values, Senate Commission for the Examination of Health Hazardous Substances, Wiley-VCH, Weinheim
DMEL	Derived minimal effect level (derived exposure level with minimal impairment)
DNEL	Derived no-effect level (derived exposure level without impairment)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
KZW	Short-term value
LGK	Storage class according to TRGS 510, Germany
MARPOL	International Convention for the Prevention of Pollution from Ships (abbreviation of "Marine Pollu- tant")
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration (estimated no-effect concentration)
ppm	Parts per million (parts per million)
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals (Registration, Evaluation, Authorization and Restriction of Chemicals)
SMW	Shift average

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Abbr.	Descriptions of the abbreviations used
TRGS	Technical Rules for Hazardous Substances (Germany)
TRGS 900	Occupational exposure limits (TRGS 900)
VbF	Ordinance on flammable liquids (Austria)
vPvB	Very Persistent and very Bioaccumulative (very persistent and very bioaccumulative)

Important literature and data sources

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU-GHS)

List of relevant phrases (code and wording as indicated in chapters 2 and 3)

Code	Text
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May irritate the respiratory tract.

Disclaimer

This information is based on our current knowledge. This SDS has been compiled exclusively for this product and is intended solely for this product.