



SAFETY DATA SHEET

according to Regulation (EU) 2020/878

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Caulkcrete (R) 100 ceramic cement

Revision 6
Revision date 2024-06-20

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

1.1. Product identifier

Product name Caulkcrete (R) 100 ceramic cement

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

Description Foundry material. Industrial uses: Uses of substances as such or in preparations at industrial sites.

1.3. Details of the supplier of the safety data sheet

Company Ransom & Randolph
Address 3535 Briarfield Boulevard
Maumee, Ohio 43537 USA
Web www.ransom-randolph.com
Telephone +1 (419) 865-9497
Fax +1 (419) 865-9997
Email SDS@ransom-randolph.com
Email address of the competent person rcarter@ransom-randolph.com

1.4. Emergency telephone number

Emergency telephone number USA +1 419 865 9497
Company Ransom & Randolph Co.
08:00-17:00 (US Eastern Std. / GMT minus 5)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008 Skin Irrit. 2: H315; Eye Irrit. 2: H319; Repr. 1B: H360FD; STOT RE 2: H373;

2.2. Label elements

Hazard pictograms



Signal Word

Danger

Hazard Statement

Skin Irrit. 2: H315 - Causes skin irritation.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Repr. 1B: H360FD - May damage fertility. May damage the unborn child.
STOT RE 2: H373 - May cause damage to organs (lungs) through prolonged or repeated exposure inhalation.

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2.2. Label elements

Precautionary Statement: Prevention	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. 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.
Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P314 - Get medical advice/attention if you feel unwell. P321 - Specific treatment (see on this label). P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.
Precautionary Statement: Storage	P405 - Store locked up.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to local and national regulations

2.3. Other hazards

Other hazards	Product contains respirable crystalline silica (RCS). Product contains zircon which contains trace amounts of naturally occurring uranium, thorium, and radium.
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Further information

	Not applicable. PBT and vPvB assessment.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
zirconium silicate		14940-68-2			60 - 70%	
monomagnesium phosphate		7757-86-0			1 - 10%	Skin Irrit. 2: H315; Eye Irrit. 2: H319;
Urea phosphate		4861-19-2			1 - 10%	Skin Irrit. 2: H315; Eye Irrit. 2: H319;
Quartz		14808-60-7	238-878-4		1 - 10%	STOT RE 1: H372;
boric acid	005-007-00-2	10043-35-3	233-139-2		0.5 - 1%	Repr. 1B: H360FD;

Particle Characteristics

	Full text for all Risk Phrases mentioned in this section are displayed in Section 16. Quartz -- 1 % w/w < "fine fraction" < 10 % w/w / CAS 14808-60-7, EC No 238-878-4 / STOT RE2: H373.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
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4.1. Description of first aid measures

Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open.
Skin contact	Wash with soap and water.
Ingestion	Drink 1 to 2 glasses of water. DO NOT INDUCE VOMITING.

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

Inhalation	May cause irritation to respiratory system.
Eye contact	May cause irritation to eyes.
Skin contact	May cause irritation to skin.
Ingestion	May cause irritation to mucous membranes.

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

Inhalation	Seek medical attention if irritation or symptoms persist.
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Seek medical attention if irritation or symptoms persist.

SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use extinguishing media appropriate to the surrounding fire conditions.
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5.2. Special hazards arising from the substance or mixture

	Burning produces irritating, toxic and obnoxious fumes.
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5.3. Advice for firefighters

	Self-contained breathing apparatus. Wear suitable protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	Avoid formation of dust. Wear suitable respiratory equipment when necessary.
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6.2. Environmental precautions

	No environmental requirements.
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6.3. Methods and material for containment and cleaning up

	Avoid raising dust. Clean the area using a vacuum cleaner. Transfer to suitable, labelled container.
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6.4. Reference to other sections

	See section for further information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

	Ensure adequate ventilation of the working area. Avoid formation of dust. In case of insufficient ventilation, wear suitable respiratory equipment.
	Do not eat, drink or smoke in areas where this product is used or stored. Wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

	Keep containers tightly closed.
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7.3. Specific end use(s)

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7.3. Specific end use(s)

Foundry material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters



OEL: Occupational exposure limit. quartz - 0.1 mg/m3 (respirable fraction); cristobalite - 0.1 mg/m3 (respirable fraction).

exposure limits: Zirconium silicate 10 mg/m3 STEL ACGIH (respirable fraction)
5 mg/m3 TWA OSHA PEL (respirable fraction).

8.1.1. Exposure Limit Values

Quartz	WEL 8-hr limit ppm: WEL 15 min limit ppm: WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust:	WEL 8-hr limit mg/m3: .1 WEL 15 min limit mg/m3: WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust:

8.2. Exposure controls

	 
8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area. <. OEL: Occupational exposure limit.
8.2.2. Individual protection measures	Wear protective clothing. EN13982, ANSI 103 or =.
Eye / face protection	Avoid contact with eyes. In case of splashing, wear:.. Approved safety goggles. safety glasses with side-shields. EN166, ANSI Z87.1 or =.
Skin protection - Handprotection	Avoid contact with skin. Wear suitable gloves. EN374, ASTM F1001 or =.
Respiratory protection	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. After selection by a Qualified person. wear. Suitable half mask respirator with filter P2 (EN 143). EN140, EN143, ASTM F2704-10 or =. EN149.
8.2.3. Environmental exposure controls	Not normally required.
Occupational exposure controls	Appropriate local exhaust ventilation is required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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9.1. Information on basic physical and chemical properties

Appearance	Powder
Colour	Off white
Odour	Slight
pH	4 - 7
Melting point	No data available
Freezing Point	Not applicable.
Initial boiling point	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	No data available
Vapour pressure	Not applicable.
Density / Relative Density	4.4 (H ₂ O = 1 @ 20 °C)
Fat Solubility	Not applicable.
Autoignition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Relative Vapour Density	Not applicable.
Partition coefficient	Not applicable.
Oxidising properties	Not applicable.
Solubility	Slightly soluble in water

9.2. Other information

Conductivity	Not applicable.
Surface tension	Not applicable.
Gas group	Not applicable.
Benzene Content	Not applicable.
Lead content	No data available
VOC (Volatile organic compounds)	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

	Not applicable.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	No Significant Hazard.
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10.4. Conditions to avoid

	No Significant Hazard.
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10.5. Incompatible materials

	No Significant Hazard.
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10.6. Hazardous decomposition products

	Hazardous Decomposition Products (silica): Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride. Reaction with water or acids generates heat.
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10.6. Hazardous decomposition products

Hazardous Decomposition Products (Zircon): Zirconium silicate will disassociate to Zirconium Dioxide (ZrO₂) and Silicon dioxide (SiO₂) when heated above 1540 degrees Celsius. Hazardous Polymerization: Will not occur.

SECTION 11: Toxicological information

11.1 Information on hazard classes

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	May cause irritation to skin.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause sensitisation by skin contact.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Possible risk of harm to the unborn child. Possible risk of impaired fertility.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Chronic Health Effects: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This product contains trace quantities of naturally occurring radioactive uranium, thorium and radium (106-120 Picocuries/gram). Overexposure to respirable dust containing radioactive materials may cause lung cancer. Zirconium silicate is exempt from NRC regulations for source material per 10 CFR 40, since it falls under the definition of material containing less than 0.05% uranium or thorium. However, calculations show that observance of 2-2.8 mg/m ³ of respirable dust will, under voluntary guidelines, ensure that intake is less than 10% of the annual limits on intake (ALS) specified in 10 CFR 20.1502(B) and NRC Standards for the protection against radiation for uranium, thorium, radium and radioactive daughter decay products.).
Aspiration hazard	Based on available data, the classification criteria are not met.
Repeated or prolonged exposure	Inhalation of dust may cause shortness of breath.

SECTION 12: Ecological information

12.1. Toxicity

Caulkcrete (R) 100 ceramic cement	Fish LC50/96h: 200.000 mg/l	Green algae EC50/96h: 2.6 mg/l
	Fish LC50/48h: > 10,000	Sheephead minnows LC50/96h: 115 mg/l

12.2. Persistence and degradability

Not applicable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient

Caulkcrete (R) 100 ceramic cement Not applicable.

12.4. Mobility in soil

Not determined.

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12.5. Results of PBT and vPvB assessment

Not determined.

12.7 Other adverse effects

Not applicable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in compliance with all. local and national regulations.

Disposal methods

Contact a licensed waste disposal company.

Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

Further information

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

SECTION 14: Transport information

14.1. UN number

The product is not classified as dangerous for carriage.

14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

14.4. Packing group

The product is not classified as dangerous for carriage.

14.5. Environmental hazards

The product is not classified as dangerous for carriage.

14.6. Special precautions for user

The product is not classified as dangerous for carriage.

14.7 Maritime Transport in bulk according to IMO instruments

The product is not classified as dangerous for carriage.

Further information

The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

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

Regulations

EU REGULATIONS:
 Candidate List - Regulation (EC) No 1907/2006, REACH Article 59(1).
 Boric Acid, CAS 10043-35-3, EC List 233-139-2 is present in this mixture.
 Authorizations - Regulation (EC) No 1907/2006, REACH Annex XIV Substances subject to authorization, as amended. No substances present, or no substances present in regulated quantities.
 Restrictions on intended use at Industrial Sites - Regulation (EC) No 1907/2006, REACH Annex

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

XVII Substances subject to restriction on marketing and use, as amended.
No substances present, or no substances present in regulated quantities.

Other EU legislation:

Commission Regulation (EU) No 474/2014 of 8 May 2014 amending Annex XVII to Regulation (EC) No 1907/2006.

Commission Regulation (EU) No 944/2013 of 2 October 2013 (5th ATP) amending Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

15.2. Chemical safety assessment

No data is available on this product.

SECTION 16: Other information

Other information

Training

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

Social Dialogue on Respirable Crystalline Silica

A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing respirable crystalline silica. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers,.

Revision

This document differs from the previous version in the following areas:

- 1 - Description.
- 2 - 2.1. Classification of the substance or mixture.
- 2 - Hazard pictograms.
- 2 - Hazard Statement.
- 8 - 8.2.1. Appropriate engineering controls.
- 8 - Respiratory protection.
- 8 - Skin protection - Handprotection.
- 8 - Eye / face protection.
- 8 - 8.2.2. Individual protection measures.
- 8 - 8.1. Control parameters.
- 15 - Labelling.
- 15 - Hazard Statement.
- 15 - Safety phrases.
- 15 - Regulations.

Text of Hazard Statements in Section 3

Skin Irrit. 2: H315 - Causes skin irritation.
Eye Irrit. 2: H319 - Causes serious eye irritation.
STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .
Repr. 1B: H360FD - May damage fertility. May damage the unborn child.

General information

STOT RE2: H373 - WARNING - May cause damage to lungs through prolonged or repeated exposure.

Further information

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Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.