



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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Caulkcrete (R) 100 ceramic cement [NA]

Revision 4
Revision date 2019-09-06

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

1.1. Product identifier

Product name Caulkcrete (R) 100 ceramic cement [NA]

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

Description Foundry material.

1.3. Details of the supplier of the safety data sheet

Company Ransom & Randolph
Address 3535 Briarfield Boulevard, PO Box 1570
Maumee, Ohio 43537 USA
Web www.ransom-randolph.com
Telephone +1 (419) 865-9497
Fax +1 (419) 865-9997
Email RR.SDS@dentsply.com
Email address of the competent person RR.SDS@dentsply.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; Carc. 1A: H350; Repr. 1B: H360FD; STOT RE 1: H372;

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.
Carc. 1A: H350 - May cause cancer (lungs), Inhalation.
Repr. 1B: H360FD - May damage fertility. May damage the unborn child.
STOT RE 1: H372 - Causes damage to organs (lungs) through prolonged or repeated exposure inhalation.

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.

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2.2. Label elements

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). Zircon 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
monomagnesium phosphate		7757-86-0			1 - 10%	Skin Irrit. 2: H319;
Urea phosphate		4861-19-2			1 - 10%	Skin Irrit. 2: H319;
quartz (conc. >= 1.0%)		14808-60-7	238-878-4		1 - 10%	Carc. 1A: H350; STOT RE 1: H372;
boric acid. .	005-007-00-2	10043-35-3	233-139-2		0.5 - 1%	Repr. 1B: H360FD;

Further information

	Full text for all Risk Phrases mentioned in this section are displayed in Section 16.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
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.

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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Use extinguishing media appropriate to the surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Self-contained breathing apparatus. Wear suitable protective clothing.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust. Wear suitable respiratory equipment when necessary.

6.2. Environmental precautions

No environmental requirements.

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.

6.4. Reference to other sections

See section [2, 8 & 13] for further information.

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

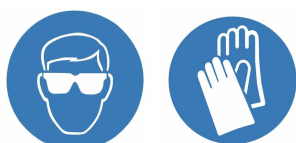
Keep containers tightly closed.

7.3. Specific end use(s)

Foundry material.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Ensure adequate ventilation of the working area.

exposure limits - Zirconium silicate 10 mg/m³ STEL ACGIH (respirable fraction)
5 mg/m³ TWA OSHA PEL (respirable fraction).all respirable crystalline silica - sum of all types - quartz + cristobalite TWA PEL OSHA (respirable fraction) 0.050 mg/m³
Action Level OSHA (respirable fraction) 0.025 mg/m³.**8.2. Exposure controls****8.2.1. Appropriate engineering controls**

Ensure adequate ventilation of the working area.

8.2.2. Individual protection measures

Wear protective clothing.

Eye / face protection

In case of splashing, wear:.. Approved safety goggles. safety glasses with side-shields.

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8.2. Exposure controls

Skin protection - Handprotection	Wear suitable gloves.
Respiratory protection	Suitable respiratory equipment.
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

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

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 toxicological effects

Acute toxicity	Harmful by inhalation.
Skin corrosion/irritation	May cause irritation to skin.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	No sensitization effects reported.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Known Human Carcinogens (Category 1).
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	<p>Chronic effects</p> <p>Prolonged inhalation of respirable crystalline silica</p> <p>In 1997, the International Agency for Research on Cancer (IARC) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France). In June 2003, the European Commission's Scientific Committee for Occupational Exposure Limits (SCOEL) concluded:</p> <p>"that the main effect in humans of the inhalation of respirable crystalline silica is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis."</p> <p>(SCOEL SUM Doc 94-final on respirable crystalline silica, June 2003)</p> <p>There is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see Section 16).</p> <p>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/m³ 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.)</p>
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 [NA]	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.

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12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient

Caulkcrete (R) 100 ceramic cement [NA] Not applicable.

12.4. Mobility in soil

Not determined.

12.5. Results of PBT and vPvB assessment

Not determined.

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

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

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

Regulations	<p>U.S. FEDERAL REGULATIONS: Caulkcrete 100. CERCLA 103 Reportable Quantity: is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.</p> <p>SARA TITLE III: Hazard Category For Section 311/312: Chronic health</p> <p>Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None</p> <p>Section 302 Extremely Hazardous Substances (TPQ): None</p> <p>EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.</p> <p>U.S. STATE REGULATIONS California Proposition 65: This product contains the following substances known to the State of California to cause cancer: Crystalline Silica as Quartz (< 5%)</p> <p>INTERNATIONAL REGULATIONS: Canadian WHMIS Classification: Class D Division 2A.</p>
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15.2. Chemical safety assessment

	No data is available on this product.
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SECTION 16: Other information

Other information

Revision	<p>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.</p> <p>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,.</p> <p>This document differs from the previous version in the following areas: 2 - Other hazards. 2 - 2.1. Classification of the substance or mixture. 2 - 2.1.2. Classification - EC 1272/2008. 2 - Hazard pictograms. 2 - Hazard Statement. 2 - Precautionary Statement: Prevention. 2 - Precautionary Statement: Response. 8 - 8.1. Control parameters. 15 - Hazard Statement.</p>
Text of Hazard Statements in Section 3	<p>Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation. Carc. 1A: H350 - May cause cancer . STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure . Repr. 1B: H360FD - May damage fertility. May damage the unborn child.</p>

General information

	STOT RE1: H372 - Causes damage to lungs through prolonged or repeated exposure.
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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
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Further information

	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.
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