



SAFETY DATA SHEET

Autocrete[®] ceramic cement

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Revision 2

Revision date 2019-9-01

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

1.1. Product identifier

Product name	Autocrete [®] ceramic cement
Product code	15030, 15032

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

Description	Foundry material.
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1.3. Details of the distributor of the safety data sheet

Company	Flexbar Machine Corporation
Address	250 Gibbs Road, Islandia, NY 11751 USA
Web	www.flexbar.com
Telephone	+1 (631) 582-8440
Fax	+1 (631) 582-8487
Email	sales@flexbar.com
Email address of the competent person	sales@flexbar.com

1.4. Emergency telephone number

Emergency telephone number	USA +1 419 865 9497
Company	Ransom & Randolph Co. 07:30 to 16:30 (Eastern Std. / GMT minus 5)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC	Xn; R42/43 Xi; R36/38 Symbols: Xn: Harmful.
Main hazards	Irritating to eyes and skin. May cause sensitisation by inhalation and skin contact.
2.1.2. Classification - EC 1272/2008	Carc. 1A: H350; Repr. 1B: H360FD; STOT RE 1: H372;

2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Carc. 1A: H350 - May cause cancer 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.

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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. P270 - Do no eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P285 - In case of inadequate ventilation wear respiratory protection.
Precautionary Statement: Response	P308+P313 - IF exposed or concerned: Get medical advice/attention. P314 - Get medical advice/attention if you feel unwell.
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 crystalline silica. 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

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
zirconium silicate		14940-68-2			40 - 70%	Xn; R42/43 Xi; R36	
phosphate binder (proprietary)					5 - 10%	Xi; R36/38	
phosphate binder 2 (proprietary)					0 - 5%	Xi; R36/38	
Magnesium Oxide		01309-48-4	215-171-9		10 - 20%	Xn; R20 Xi; R37/38	
boric acid	005-007-00-2	10043-35-3	233-139-2		0 - 5%	Repr. Cat. 2; R60-61	

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
zirconium silicate		14940-68-2			40 - 70%		
phosphate binder (proprietary)					5 - 10%	Skin Irrit. 2: H315; Eye Irrit. 2: H319;	
phosphate binder 2 (proprietary)					0 - 5%	Skin Irrit. 2: H315; Eye Irrit. 2: H319;	
quartz (conc. >= 1.0%)		14808-60-7	238-878-4		0 - 5%	Carc. 1A: H350; STOT RE 1: H372;	
Magnesium Oxide		01309-48-4	215-171-9		10 - 20%		
boric acid	005-007-00-2	10043-35-3	233-139-2		0 - 5%	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.

**4.1. Description of first aid measures**

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 [2, 8 & 13] 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)

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

	Ensure adequate ventilation of the working area.
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8.1. Control parameters

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

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.

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



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

	<p>Hazardous Decomposition Products (silica): Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride. Reaction with water or acids generates heat.</p> <p>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.</p>
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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</p>



11.1. Information on toxicological effects

	<p>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.
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Partition coefficient

	Autocrete® ceramic cement Not applicable.
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12.4. Mobility in soil

	Not determined.
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12.5. Results of PBT and vPvB assessment

	Not determined.
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12.6. Other adverse effects

	Not applicable.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

	Contact a licensed waste disposal company.
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Disposal of packaging

**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****Regulations**

U.S. FEDERAL REGULATIONS:
 CERCLA 103 Reportable Quantity: Autocrete not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
 SARA TITLE III:
 Hazard Category For Section 311/312: Chronic health

 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

 Section 302 Extremely Hazardous Substances (TPQ): None

 EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

 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%)

 INTERNATIONAL REGULATIONS:

 Canadian WHMIS Classification: Class D Division 2A.

15.2. Chemical safety assessment



15.2. Chemical safety assessment

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

Other information

	<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>
Revision	This document differs from the previous version in the following areas:. 2 - Precautionary Statement: Prevention.
Text of risk phrases in Section 3	R20 - Harmful by inhalation. R36/38 - Irritating to eyes and skin. R36 - Irritating to eyes. R37/38 - Irritating to respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact. R60 - May impair fertility. R61 - May cause harm to the unborn child.
Text of Hazard Statements in Section 3	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.

General information

	STOT RE 1: H372 - Causes damage to organs (lungs) through prolonged or repeated exposure inhalation.
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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.
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