



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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Suspendaslurry ZR [EU]

Revision 5
Revision date 2019-07-10

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

1.1. Product identifier

Product name Suspendaslurry ZR [EU]

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

2.2. Label elements

Hazard Statement	This mixture/substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.
	No Significant Hazard

2.3. Other hazards

Other hazards	Amorphous silica may be converted to crystalline silica (cristobalite) when subjected to very high temperatures (1700° F). Exposure to respirable crystalline silica may cause lung disease. This material contains trace amounts of naturally occurring uranium, thorium, and radium.
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Further information

Not applicable. PBT and vPvB assessment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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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%	
silica (amorphous)		7631-86-9	231-545-4		1 - 10%	

Further information

Full text for all Risk Phrases mentioned in this section are displayed in Section 16.

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.

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 raising 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 containers for disposal.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

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7.1. Precautions for safe handling

	Avoid raising dust. Ensure adequate ventilation of the working area. 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

	exposure limits - Silica, vitreous (fused, amorphous) 80 mg/m ³ / (% Silica), TWA PEL (respirable fraction).
	exposure limits - Zirconium silicate 10 mg/m ³ STEL ACGIH (respirable fraction) 5 mg/m ³ TWA OSHA PEL (respirable fraction).

8.1.1. Exposure Limit Values

Ethanolamine (2-Aminoethanol)	WEL 8-hr limit ppm: 1	WEL 8-hr limit mg/m ³ : 2.5
	WEL 15 min limit ppm: 3	WEL 15 min limit mg/m ³ : 7.6
	WEL 8-hr limit mg/m ³ total - inhalable dust:	WEL 15 min limit mg/m ³ total - inhalable dust:
	WEL 8-hr limit mg/m ³ total - respirable dust:	WEL 15 min limit mg/m ³ total - respirable dust:
Formaldehyde...% (Formaldehyde)	WEL 8-hr limit ppm: 2	WEL 8-hr limit mg/m ³ : 2.5
	WEL 15 min limit ppm: 2	WEL 15 min limit mg/m ³ : 2.5
	WEL 8-hr limit mg/m ³ total - inhalable dust:	WEL 15 min limit mg/m ³ total - inhalable dust:
	WEL 8-hr limit mg/m ³ total - respirable dust:	WEL 15 min limit mg/m ³ total - respirable dust:
Quartz < 1.0% RSC (Quartz)	WEL 8-hr limit ppm:	WEL 8-hr limit mg/m ³ : 0.3
	WEL 15 min limit ppm:	WEL 15 min limit mg/m ³ :
	WEL 8-hr limit mg/m ³ total - inhalable dust:	WEL 15 min limit mg/m ³ total - inhalable dust:
	WEL 8-hr limit mg/m ³ total - respirable dust:	WEL 15 min limit mg/m ³ total - respirable dust:

8.2. Exposure controls

	 
8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area.
8.2.2. Individual protection measures	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.

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8.2. Exposure controls

Occupational exposure controls	Appropriate local exhaust ventilation is required.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Yellow
Odour	Slight
pH	9 - 11
Melting point	Not applicable.
Freezing Point	≈ 0 °C
Initial boiling point	No data available
Evaporation rate	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.2 - 1.8 (H ₂ O = 1 @ 20 °C)
Fat Solubility	Not applicable.
Partition coefficient	No data available
Viscosity	No data available
Solubility	Miscible in water

9.2. Other information

Conductivity	No data available
Surface tension	No data available
Gas group	Not applicable.
Benzene Content	Not applicable.
Lead content	Not applicable.
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

	Moisture.
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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 (ZrO ₂) and Silicon dioxide (SiO ₂) when heated above 1540 degrees Celsius. Hazardous Polymerization: Will not occur.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Prolonged or repeated exposure may cause irritation to skin and mucous membranes.
Serious eye damage/irritation	No irritation expected.
Respiratory or skin sensitisation	No sensitization effects reported.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	No observed effect level. No observed effect concentration.
STOT-single exposure	No known adverse health effects.
STOT-repeated exposure	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	No Significant Hazard.
Repeated or prolonged exposure	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.

11.1.4. Toxicological Information

	Not determined
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SECTION 12: Ecological information

12.1. Toxicity

	Not determined
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12.2. Persistence and degradability

	No data is available on this product.
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12.3. Bioaccumulative potential

	Does not bioaccumulate.
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Partition coefficient

	Suspendaslurry ZR [EU] No data available
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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

	Empty containers can be sent for disposal or recycling.
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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**

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

15.2. Chemical safety assessment

No data is available on this product.

SECTION 16: Other information**Other information****Revision**

This document differs from the previous version in the following areas:
12 - 12.1. Toxicity.

Further 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.

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.