



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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Matrixsol (TM) Large Particle - colloidal silica [NA]

Revision 3

Revision date 2021-09-30

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

1.1. Product identifier

Product name Matrixsol (TM) Large Particle - colloidal silica [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 SDS@ransom-randolph.com
Email address of the competent person dyouel@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

2.2. Label elements

Precautionary Statement: While this material is not considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and made available for employees and other users of this product.

Prevention P262 - Do not get in eyes, on skin, or on clothing.
Wear suitable gloves and eye/face protection.

Hazard Statement No Significant Hazard

2.3. Other hazards

Other hazards Portions of the amorphous silica may be converted to crystalline silica (cristobalite) when subjected to higher temperatures (1700° F / 927° C), such as when used in a mold for ferrous and other high temperature alloy castings. The exposure to crystalline silica is highest at the mold knockout stage of the casting process.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Exposure to respirable crystalline silica may cause lung disease and cancer.

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
silica (amorphous)		7631-86-9	231-545-4			

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.
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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**

	Wear suitable protective equipment.
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6.2. Environmental precautions

	Do not allow product to enter drains.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. 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**

	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Wash hands after handling the product.
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7.2. Conditions for safe storage, including any incompatibilities

Do NOT allow to freeze. Keep in a cool, dry, well ventilated area. Keep containers tightly closed.

7.3. Specific end use(s)

Foundry material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

exposure limits - Crystalline Silica, Cristobalite - 0.025 mg/m³ TWA ACGIH TLV (respirable fraction); 50 ug/m³ 8-hr TWA PEL (respirable fraction).

exposure limits - Silica, vitreous (fused, amorphous) 80 mg/m³ / (% Silica), TWA PEL (respirable fraction).

8.1.1. Exposure Limit Values

Matrixsol (TM) Large Particle - colloidal silica [NA] (Matrixsol(TM) 30 colloidal silica)	WEL 8-hr limit ppm:	WEL 8-hr limit mg/m ³ : 2.1
	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

Apron (Plastic or rubber).

Eye / face protection

In case of splashing, wear:.. Approved safety goggles.

Skin protection -

Wear suitable gloves.

Handprotection

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

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	Liquid
Colour	Clear
pH	8 - 10
Initial boiling point	100 °C
Relative density	1.2 (H ₂ O = 1 @ 20 °C)
Vapour pressure	No data available
Vapour density	No data available
Evaporation rate	No data available
Partition coefficient	No data available
Viscosity	No data available
Freezing Point	≈ 0 °C
Explosive properties	Not applicable.
Oxidising properties	Not applicable.
Autoignition temperature	Not applicable.
Flammability (solid, gas)	Not applicable.
Melting point	Not applicable.
Fat Solubility	Not applicable.
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

	Direct sunlight. Do NOT allow to freeze.
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10.5. Incompatible materials

	Avoid contact with: Sodium chloride.
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10.6. Hazardous decomposition products

	None.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	May cause irritation to skin.
Serious eye damage/irritation	May cause irritation to eyes.

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11.1. Information on toxicological effects

Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
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	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Repeated or prolonged exposure	May cause irritation to skin.

11.1.4. Toxicological Information

Matrixsol (TM) Large Particle - colloidal silica [NA]	Oral Rat LD50: > 15 g/kg
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SECTION 12: Ecological information

12.1. Toxicity

Matrixsol (TM) Large Particle - colloidal silica [NA]	Daphnia EC50/48h: 7600.000 mg/l	Green Algae EC50/48h: 440 mg/l
	Brachydanio Rerio LC50/96h: >5000	

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

	Matrixsol (TM) Large Particle - colloidal silica [NA] 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 applicable.
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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

	Do NOT reuse empty containers. 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.
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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	<p>U.S. FEDERAL REGULATIONS: Matrixsol Large Particle. 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: None</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>INTERNATIONAL REGULATIONS:</p> <p>Canadian WHMIS Classification: Not a controlled product.</p> <p>Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL).</p>
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15.2. Chemical safety assessment

No data is available on this product.

SECTION 16: Other information

Other information

IARC and SCOEL publications

In 1997, IARC (the International Agency for Research on Cancer) 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 fibres, 1997, Vol. 68, IARC, Lyon, France.)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded

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Other information

	<p>that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer 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..."</p> <p>So 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.</p> <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>
Revision	<p>This document differs from the previous version in the following areas: 2 - 2.2. Label elements.</p>

Further information

	<p>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.</p>
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