

SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

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AURUM (TM) investment

Revision 3
Revision date 2024-05-17

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

1.1. Product identifier

Product name	AURUM (TM) investment
Nanoform	No data available.

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

Product Use	[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites;
Description	Foundry material.

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - GHS	STOT RE 1: H372;
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2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	STOT RE 1: H372 - Causes damage to organs (lungs) through prolonged or repeated exposure inhalation.
Precautionary Statement: Prevention	P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash (hands) thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.
Precautionary Statement: Response	P314 - Get medical advice/attention if you feel unwell.
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). . . 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 (cristobalite) (Silica, Crystalline-a-Quartz and Cristobalite)		14464-46-1	238-455-4		40 - 50%	STOT RE 1: H372;
Quartz (Silica, Crystalline-a-Quartz and Cristobalite)		14808-60-7	238-878-4		20 - 30%	STOT RE 1: H372;
Calcium sulfate		26499-65-0			20 - 30%	

Particle Characteristics

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 noxious 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.

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6.4. Reference to other sections

See section 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 Limit Values

Quartz (Silica, Crystalline- α -Quartz and Cristobalite)	ACGIH TLV TWA: 0.025 mg/m ³ (R)	ACGIH TLV STEL: -
	Notations: A2	OSHA PEL 8hr TWA ppm: -
	OSHA PEL 8hr TWA mg m3: -	Skin Designation: -
	NIOSH REL 10hr TWA ppm:	NIOSH REL 10hr TWA mg m3:
	NIOSH REL 15 min ST ppm:	NIOSH REL 15 min ST mg m3:
Silica (cristobalite) (Silica, Crystalline- α -Quartz and Cristobalite)	ACGIH TLV TWA: 0.025 mg/m ³ (R)	ACGIH TLV STEL: -
	Notations: A2	OSHA PEL 8hr TWA ppm: -
	OSHA PEL 8hr TWA mg m3: -	Skin Designation: -
	NIOSH REL 10hr TWA ppm:	NIOSH REL 10hr TWA mg m3:
	NIOSH REL 15 min ST ppm:	NIOSH REL 15 min ST mg m3:

8.2. Exposure controls

Appropriate engineering controls	  	
	Ensure adequate ventilation of the working area.	
	Wear protective clothing.	
	In case of splashing, wear: . Approved safety goggles. safety glasses with side-shields.	
	Wear suitable gloves.	
Eye / face protection	Suitable respiratory equipment.	
Skin protection - Hand protection		
Respiratory protection		
8.2.3. Environmental exposure controls	Not normally required.	
Occupational exposure controls	Appropriate local exhaust ventilation is required.	

SECTION 9: Physical and chemical properties

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9.1. Information on basic physical and chemical properties

State	Powder
Color	Off white
Odor	Slight
pH	6 - 8
Density / Relative Density	2.2 - 2.7 (H ₂ O = 1 @ 20 °C)
Explosive properties	No data available
Melting point	No data available
Flash point	No data available
Viscosity	Not applicable.
Oxidizing properties	Not applicable.
Evaporation rate	Not applicable.
Flammability limits	Not applicable.
Vapor pressure	Not applicable.
Relative Vapour Density	Not applicable.
Freezing Point	Not applicable.
Initial boiling point	Not applicable.
Fat Solubility	Not applicable.
Partition coefficient	Not applicable.
Autoignition temperature	Not applicable.
Solubility	Slightly soluble in water

9.2. Other information

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

9.2.1. Information with regard to physical hazard classes

	No data available.
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9.2.2. Other safety characteristics

	No data available.
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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
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10.6. Hazardous decomposition products

and produce silicone tetrafluoride. Reaction with water or acids generates heat.

SECTION 11: Toxicological information

11.1 Information on hazard classes

Acute toxicity	Not applicable. Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Not applicable. Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Not applicable. Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Not applicable. Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Not applicable. Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Not applicable. Based on available data, the classification criteria are not met.
STOT-single exposure	Not applicable. Based on available data, the classification criteria are not met.
STOT-repeated exposure	Chronic effects Prolonged inhalation of respirable crystalline silica 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: "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." (SCOEL SUM Doc 94-final on respirable crystalline silica, June 2003) 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).
Aspiration hazard	Not applicable. Based on available data, the classification criteria are not met.
Repeated or prolonged exposure	Inhalation of dust may cause shortness of breath.

11.1.4. Toxicological information

No data available

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

Not applicable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient

AURUM (TM) investment 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 Endocrine disrupting properties

	No data available.
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12.7 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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Further information

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

	The product is not classified as dangerous for carriage.
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14.4. Packing group

	The product is not classified as dangerous for carriage.
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14.5. Environmental hazards

	The product is not classified as dangerous for carriage.
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14.6. Special precautions for user

	The product is not classified as dangerous for carriage.
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14.7 Maritime Transport in bulk according to IMO instruments

	The product is not classified as dangerous for carriage.
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Further information

	The product is not classified as dangerous for carriage.
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SECTION 15: Regulatory information

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

Regulations	WGK 1. . . Hazard Communication Standard: 29 Code of Federal Regulations 1910.1200: Occupational Safety and Health Standards: Z: Toxic and Hazardous Substances: Hazard Communication. . . COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
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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,. . . STOT RE1: H372 - DANGER - Causes damage to lungs through prolonged or repeated exposure by inhalation.
Text of Hazard Statements in Section 3	STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .

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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