SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

KC2000 and KC2000 EW investment

Revision 0

Revision date 2022-07-11

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

1.1. Product identifier

Product name	KC2000 and KC2000 EW investment

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 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	Carc. 1A: H350; STOT RE 1: H372;

2.2. Label elements

Hazard pictograms	This substance / mixture has been classified in accordance with the US Federal OSHA Hazard Communication Standard 29CFR 1910.1200. Substance concentration band-ranges are presented, and minor ingredient composition maybe withheld, to protect trade secrets. 
Signal Word	Danger
Hazard Statement	Carc. 1A: H350 - May cause cancer inhalation. 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. P270 - Do not 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.

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2.2. Label elements

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	Local and national regulations P501 - Dispose of contents/container to

2.3. Other hazards

Other hazards	Product contains respirable crystalline silica (RCS).

Further information

	Not applicable. PBT and vPvB assessment.

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
quartz > 10 % (Silica, Crystalline-a-Quartz and Cristobalite)		14808-60-7	238-878-4		30 - 40%	Carc. 1A: H350; STOT RE 1: H372;
silica - cristobalite (Silica, Crystalline-a-Quartz and Cristobalite)		14464-46-1	238-455-4		30 - 40%	Carc. 1A: H350; 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

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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 raising dust.

6.2. Environmental precautions

Use appropriate container to avoid environmental contamination.

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 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid formation of dust. Ensure adequate ventilation of the working area. <. OEL: Occupational exposure limit. 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

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.

Exposure Limit Values

quartz > 10 % (Silica, Crystalline-a-Quartz and Cristobalite)	ACGIH TLV TWA: 0.025 mg/m³ (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-a-Quartz and Cristobalite)	ACGIH TLV TWA: 0.025 mg/m³ (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

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8.2. Exposure controls

	
Appropriate engineering controls	Ensure adequate ventilation of the working area. <. OEL: Occupational exposure limit.
Individual protection measures	Wear:. Protective clothing. applicable international Standards are. EN13982, ANSI 103 or =.
Eye / face protection	Avoid contact with eyes. Wear:. Approved safety goggles. safety glasses with side-shields. applicable international Standards are. EN166, ANSI Z87.1 or =.
Skin protection - Hand protection	Avoid contact with skin. Wear suitable gloves. applicable international Standards are. EN374, ASTM F1001 or =.
Respiratory protection	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. . . After selection by a Qualified person. Wear:. Suitable respiratory equipment. applicable international Standards are. EN140, EN143, ASTM F2704-10 or =.
8.2.3. Environmental exposure controls	Use appropriate container to avoid environmental contamination.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State	Powder
Color	White
pH	6 - 8
Density / Relative Density	2.2 - 2.7
Viscosity	No data available
Vapor pressure	No data available
Relative Vapour Density	Not applicable.
Odor threshold	Not applicable.
Explosive properties	Not applicable.
Oxidizing properties	Not applicable.
Fat Solubility	Not applicable.
Partition coefficient	Not applicable.
Autoignition temperature	Not applicable.
Melting point	Not applicable.
Freezing Point	Not applicable.
Initial boiling point	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability limits	Not applicable.
Solubility	Slightly soluble in water

9.2. Other information

Conductivity	Not applicable.
Surface tension	Not applicable.
Gas group	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

	Not applicable.

10.2. Chemical stability

	Stable under normal conditions.

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10.3. Possibility of hazardous reactions

	No Significant Hazard.

10.4. Conditions to avoid

	Moisture.

10.5. Incompatible materials

	No Significant Hazard.

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.

SECTION 11: Toxicological information

11.1 Information on hazard classes

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 sensitization	No sensitizaton effects reported.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Known Human Carcinogens (Category 1).
Reproductive toxicity	No observed effect level. No observed effect concentration.
STOT-single exposure	No known adverse health effects.
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	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

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SECTION 12: Ecological information

12.1. Toxicity

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12.1. Toxicity

KC2000 and KC2000 EW investment	Fish LC50/96h: 10000.0000 mg/l

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient

KC2000 and KC2000 EW investment	Not applicable.

12.4. Mobility in soil

not determined.

12.5. Results of PBT and vPvB assessment

not determined.

12.7 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

Empty containers can be sent for disposal or recycling.

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 Maritime Transport in bulk according to IMO instruments

The product is not classified as dangerous for carriage.

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	U.S. FEDERAL REGULATIONS: KC2000 family of investments. 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. SARA TITLE III: Hazard Category For Section 311/312: Chronic health quartz. 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. INTERNATIONAL REGULATIONS: Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL). Canadian WHMIS Classification: Class D2A (Chronic toxic effects), D2A (Carcinogenicity) 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. SARA TITLE III: Hazard Category For Section 311/312: Chronic health quartz. 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. INTERNATIONAL REGULATIONS: Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL). Canadian WHMIS Classification: Class D2A (Chronic toxic effects), D2A (Carcinogenicity).

15.2. Chemical safety assessment

	No data is available on this product.

SECTION 16: Other information

Other information

Text of Hazard Statements in Section 3	Carc. 1A: H350 - May cause cancer . STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .

Further information

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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.