SAFETY DATA SHEET

according to Regulation (EU) 2020/878

Mulcoa(R) 43 / Mulgrain(R) 43

Revision 1

Revision date 2024-09-18

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

1.1. Product identifier

Product name	Mulcoa(R) 43 / Mulgrain(R) 43

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

Description	Foundry material. Industrial uses: Uses of substances as such or in preparations at industrial sites.

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

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) For medical advice contact: NHS 111 in England: 111 NHS 24 in Scotland: 111 NHS Direct in Wales: 111 or 0845 4647

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008	Carc. 1A: H350; STOT RE 1: H372;

2.2. Label elements

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

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2.2. Label elements

	STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .
Precautionary Statement: Prevention	P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P284 - [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 comply with local/regional/national/international regulations

2.3. Other hazards

Other hazards	Product contains respirable crystalline silica (RCS). 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
Mullite		1302-93-8			60 - 70%	
silica (amorphous)		7631-86-9	231-545-4		10 - 20%	
silica - cristobalite		14464-46-1	238-455-4		10 - 20%	Carc. 1A: H350; STOT RE 1: H372;

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	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.

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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

	This product is not flammable.

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

	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. HEPA filtered. Transfer to suitable, labelled container.

6.4. Reference to other sections

	See section 2, 8, and 13 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. Do not eat, drink or smoke in areas where this product is used or stored. Wash hands after handling the product. Adopt best Manual Handling considerations when handling, carrying and dispensing.

7.2. Conditions for safe storage, including any incompatibilities

	Keep containers tightly closed.

7.3. Specific end use(s)

	See section 1.2 for further information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

	OEL: Occupational exposure limit. quartz - 0.1 mg/m3 (respirable fraction); cristobalite - 0.1 mg/m3 (respirable fraction).

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area. <. OEL: Occupational exposure limit.
8.2.2. Individual protection measures	Wear protective clothing.
Eye / face protection	Avoid contact with eyes. Wear:. Approved safety goggles. safety glasses with side-shields.
Skin protection - Handprotection	Avoid contact with skin. Wear suitable gloves.
Respiratory protection	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health

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8.2. Exposure controls

	effects. After selection by a Qualified person. Wear:. Suitable half mask respirator with filter P3 (EN 143). EN149.
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

Appearance	Solid/Powder
Colour	Light grey/Off white
Odour	Odourless
Odour threshold	No data available
pH	6.5 - 8
Melting point	= 1650 °C
Freezing Point	No data available
Initial boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper Explosive Limit	No data available
Lower Explosive Limit	No data available
Vapour pressure	No data available
Relative Vapour Density	No data available
Density / Relative Density	No data available
Fat Solubility	Not applicable.
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available
Solubility	Insoluble 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.

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10: Stability and reactivity

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10.1. Reactivity

	Not applicable.

10.2. Chemical stability

	Stable under normal conditions.

10.3. Possibility of hazardous reactions

	No Significant Hazard.

10.4. Conditions to avoid

	Avoid formation of dust.

10.5. Incompatible materials

	Strong oxidising agents.

10.6. Hazardous decomposition products

	silicon dioxide. aluminum oxide.

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 sensitisation	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.

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11.1 Information on hazard classes

Repeated or prolonged exposure	Inhalation of dust may cause shortness of breath.

11.2 Information on other hazards

	No data available.

SECTION 12: Ecological information

12.1. Toxicity

Mulcoa(R) 43 / Mulgrain(R) 43	**Daphnia EC50/48h:** 707.9000 mg/l	**Algae IC50/72h:** 1000.0000 mg/l
	Fish LC50/96h: 1000.0000 mg/l	

12.2. Persistence and degradability

	Not applicable.

12.3. Bioaccumulative potential

	Does not bioaccumulate.

Partition coefficient

	Mulcoa(R) 43 / Mulgrain(R) 43 No data available

12.4. Mobility in soil

	Not determined.

12.5. Results of PBT and vPvB assessment

	Not determined.

12.6 Endocrine disrupting properties

	This product does not contain any known or suspected endocrine disruptors.

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

	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. Inorganic unused products, hazardous. The site may consider using 16 03 03 – inorganic wastes containing hazardous substances. Inorganic unused products, Other. The site may consider using EWC 16 03 04 inorganic wastes other than those mentioned in 16 03 03. 16 03 03 - inorganic wastes containing hazardous substances.

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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 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.

SECTION 15: Regulatory information

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

Regulations

WGK.

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). EU REGULATIONS: Candidate List, Authorizations and/or Restrictions on intended use at industrial sites : No substances present, or no substances present in regulated quantities.

Other EU legislation:
Commission Regulation (EU) No 474/2014 of 8 May 2014 amending Annex XVII to Regulation (EC) No 1907/2006.
Commission Regulation (EU) No 944/2013 of 2 October 2013 (5th ATP) amending Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

EU REGULATIONS:
Candidate List - Regulation (EC) No 1907/2006, REACh Article 59(1).
CAS 556-67-2, Octamethylcyclotetrasiloxane - D4 is present.
CAS 541-02-6, Decamethylcyclopentasiloxan - D5 is present.
CAS 540-97-6, Dodecamethylcyclopentasiloxan - D6 is present.
Authorizations - Regulation (EC) No 1907/2006, REACh Annex XIV Substances subject to authorization, as amended. No substances present, or no substances present in regulated quantities. is present.
Restrictions on intended use at Industrial Sites - Regulation (EC) No 1907/2006, REACh Annex XVII Substances subject to restriction on marketing and use, as amended.
No substances present, or no substances present in regulated quantities. is present.

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

	Other EU legislation: Commission Regulation (EU) No 474/2014 of 8 May 2014 amending Annex XVII to Regulation (EC) No 1907/2006. Commission Regulation (EU) No 944/2013 of 2 October 2013 (5th ATP) amending Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

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.
Revision	This document differs from the previous version in the following areas:. 2 - Precautionary Statement: Prevention.
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

	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.