

SAFETY DATA SHEET

according to Regulation (EU) 2020/878

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Novocast

Revision 0 Revision date 2025-01-09

| SECTION 1: Identification of the substance/mixture and of th | ne compan | y/undertaking |
|--|-----------|---------------|
|--|-----------|---------------|

1.1. Product identifier

Product name Novocast

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

www.ransom-randolph.com

Telephone +1 (419) 865-9497

Fax +1 (419) 865-9997

Email SDS@ransom-randolph.com rcarter@ransom-randolph.com competent person

1.4. Emergency telephone number

Emergency telephone number

Company

Web

USA +1 419 865 9497

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

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.

Hazard pictograms



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2.2. Label elements

| 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: | P201 - Obtain special instructions before use. |
| Prevention | 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. |
| Precautionary Statement: | P308+P313 - IF exposed or concerned: Get medical advice/attention. |
| Response | P314 - Get medical advice/attention if you feel unwell. |
| Precautionary Statement: | P405 - Store locked up. |
| Storage | |
| Precautionary Statement: | P501 - Dispose of contents/container to local and national regulations |
| Disposal | |
| 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 |
|-------------------------------------|-----------|------------|-----------|---------------------------|-----------------|----------------------------|
| silica - cristobalite | | 14464-46-1 | 238-455-4 | Number | • | Carc. 1A: H350; STOT RE 1: |
| Silica - Cristobalite | | 14404-40-1 | 230-433-4 | | 40 - 30 /0 | H372: |
| | | 00400 05 0 | | | | , |
| calcium sulfate. (Plaster of Paris) | | 26499-65-0 | | | 30 - 40% | |
| | | | | | 40 000/ | 0 44 11050 0707 05 4 |
| quartz > 10 % | | 14808-60-7 | 238-878-4 | | 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 | 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. | | | | | |

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| 4.2. Most important symptoms a | and effects, both acute and delayed |
| 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 me | asures |
| 5.1. Extinguishing media | |
| | Use extinguishing media appropriate to the surrounding fire conditions. |
| 5.2. Special hazards arising from | n 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 relea | ase measures |
| 6.1. Personal precautions, prote | ctive equipment and emergency procedures |
| | Avoid raising dust. |
| 6.2. Environmental precautions | |
| | Use appropriate container to avoid environmental contamination. |
| 6.3. Methods and material for co | ontainment 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 s | torage |
| 7.1. Precautions for safe handlir | ng |
| | 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 contr | ols/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 |
| | |

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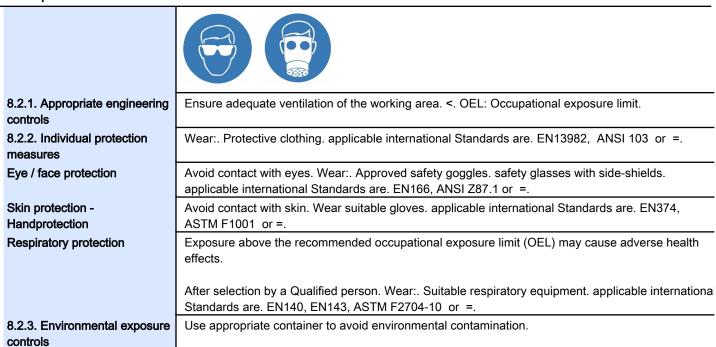
| 8.1. | Control | parameters |
|------|---------|------------|
|------|---------|------------|

Action Level OSHA (respirable fraction) 0.025 mg/m3.

8.1.1. Exposure Limit Values

| calcium sulfate. (Plaster of Paris) | WEL 8-hr limit ppm: - | WEL 8-hr limit mg/m3: - |
|-------------------------------------|---|--|
| | WEL 15 min limit ppm: - | WEL 15 min limit mg/m3: - |
| | WEL 8-hr limit mg/m3 total 10 inhalable dust: | WEL 15 min limit mg/m3 total - inhalable dust: |
| | WEL 8-hr limit mg/m3 total 4 | WEL 15 min limit mg/m3 total - |
| | respirable dust: | respirable dust: |

8.2. Exposure controls



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 | Powder |
|----------------------------|-----------------|
| Colour | White |
| Odour | Odourless |
| Odour threshold | Not applicable. |
| pH | Not applicable. |
| Melting point | Not applicable. |
| Freezing Point | Not applicable. |
| Initial boiling point | Not applicable. |
| Flash point | Not applicable. |
| Evaporation rate | Not applicable. |
| Flammability (solid, gas) | Not applicable. |
| Vapour Flammability | Not applicable. |
| Upper Explosive Limit | Not applicable. |
| Lower Explosive Limit | Not applicable. |
| Vapour pressure | Not applicable. |
| Relative Vapour Density | Not applicable. |
| Density / Relative Density | Not applicable. |
| Water solubility | Not applicable. |
| Fat Solubility | Not applicable. |
| Partition coefficient | Not applicable. |
| (n-octanol/water) | Net and Carle |
| Partition coefficient | |
| Autoignition temperature | |
| Decomposition temperature | 1450 °C |
| Viscosity | Not applicable. |
| Explosive properties | |
| Oxidising properties | Not applicable. |

9.2. Other information

| Conductivity | Not applicable. |
|------------------|-----------------|
| Surface tension | Not applicable. |
| Specific gravity | Not applicable. |
| Gas group | Not applicable. |
| | |

SECTION 10: Stability and reactivity

| | | | | | ty |
|--|--|--|--|--|----|
| | | | | | |

| Not applicable. | | |
|-----------------|--|--|
| | | |

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No Significant Hazard.

10.4. Conditions to avoid

Moisture.

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.

SECTION 11: Toxicological information

11.1 Information on hazard classes

Acute toxicity

Skin corrosion/irritation

Serious eye damage/irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT-single exposure

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Prolonged or repeated exposure may cause irritation to skin and mucous membranes.

No irritation expected.

No sensitizaton effects reported.

No mutagenic effects reported.

Known Human Carcinogens (Category 1).

No observed effect level. No observed effect concentration.

No known adverse health effects.

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

Repeated or prolonged exposure

No Significant Hazard.

Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.

11.1.4. Toxicological Information

Novocast Oral Mouse LD50: 5000 mg/kg

SECTION 12: Ecological information

12.1. Toxicity

Novocast Fish LC50/96h: 10000.0000 mg/l

12.2. Persistence and degradability

No data is available on this product.

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|---|--|
| 12.3. Bioaccumulative potential | |
| | |
| | Does not bioaccumulate. |
| Partition coefficient | |
| | Novocast 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 cons | iderations |
| 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 info | rmation |
| 14.1. UN number | |
| 14.1. Ott Hambol | The product is not classified as dangerous for carriage. |
| 14.2. UN proper shipping name | The product is not oldesined as dangerous for carriage. |
| 14.2. Olt propor ompping name | The product is not classified as dangerous for carriage. |
| 14.3. Transport hazard class(es | |
| 14.5. Hansport hazaru dass(es | |
| 44.4 Dealdon marin | The product is not classified as dangerous for carriage. |
| 14.4. Packing group | I |
| 445 5 1 411 1 | The product is not classified as dangerous for carriage. |
| 14.5. Environmental hazards | T |
| | The product is not classified as dangerous for carriage. |
| 14.6. Special precautions for use | er . |
| | |
| | The product is not classified as dangerous for carriage. |
| 14.7 Maritime Transport in bulk | <u>'</u> |
| 14.7 Maritime Transport in bulk | <u>'</u> |
| 14.7 Maritime Transport in bulk Further information | according to IMO instruments |
| | according to IMO instruments |
| | according to IMO instruments The product is not classified as dangerous for carriage. The product is not classified as dangerous for carriage. |

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

Regulations

U.S. FEDERAL REGULATIONS: SC20 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).

15.2. Chemical safety assessment

No data is available on this product.

SECTION 16: Other information

Other information

| Text of Hazar | d Statements ir | ì |
|---------------|-----------------|---|
| Section 3 | | |

Carc. 1A: H350 - May cause cancer.

STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .

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.