

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

1.1. Product identifier

C3 Monolithic Refractory

CAS No.:
EG No.:
INDEX No.:
REACH No.:

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

Relevant identified uses: Metal production and processing, including alloys
Uses advised against: Other

1.3. Details of the supplier of the safety data sheet

Manufacturer

Morgan Molten Metal Systems GmbH

Noltinastrasse 29
D 37297 Berkatal

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Telefax:

Morgan Molten Metal Systems (Suzhou) Co. Ltd.

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Morganite Crucible (India) Ltd

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Diamond Crucible Co. Ltd

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IN 384 002 Mehsana

Telephone: +91 (0) 2762 254 186

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Morganite Brasil Ltda

Av do Taboão 3265
BR 09565-000 São Bernardo do Campo

Telephone: +55 (0) 11 4075-0400

Telefax:

São Paulo

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Morgan Molten Metal Systems GmbH

Noltinastrasse 29
D 37297 Berkatal

Telephone: +49 (0) 56 57 7010

Telefax:

Information contact

Morgan Molten Metal Systems GmbH

Information telephone: +49 (0) 56 57 7010

Information telefax:

E-mail (competent person):

Website: <http://www.morganmms.com/>

1.4. Emergency telephone number

Morgan Molten Metal Systems GmbH
This number is serviced during office hours.

Telephone: +49 (0) 56 57 7010

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:
Acute Tox. 4, H332

2.2. Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



Signal word:	GHS07 Warning	
Hazard statements:	H332	Harmful if inhaled.
Precautionary statements:	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P271	Use only outdoors or in a well-ventilated area.
	P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P312	Call a POISON CENTER/doctor if you feel unwell.

Hazardous component(s) for labelling

Cristobalite; Quartz

Special labelling of particular preparations:

Restricted to professional users. Safety data sheet available for professional user on request.

2.3. Other hazards

Extended inhalation at levels above the workplace limit value can cause irreversible damage to the lungs (silicosis). Activities or processes involving exposure to respirable quartz and cristobalite dust (except coal miner's dust) are considered to be carcinogenic Category 1 (EU): known to be carcinogenic to humans.

SECTION 3: Composition / information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Mixture related information

Composition/information on ingredients

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008 (CLP):
mullite	215-113-2	1302-93-8			40 - 60 %	
alumina	215-691-6	1344-28-1			40 - 60 %	
cristobalite	238-455-4	14464-46-1			0 - 10 %	
quartz	238-878-4	14808-60-7			0 - 10 %	

(Full text of H- and EUH-phrases: see section 16.)

SECTION 4: First aid measures

4.1. Description of first aid measures

- General information:** In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Following inhalation:** Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position. Seek medical attention if problems persist.
- Following skin contact:** After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.
- After eye contact:** In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After ingestion:** Rinse mouth immediately and drink plenty of water. Seek medical attention if problems persist.

4.2. Most important symptoms and effects, both acute and delayed

Respiratory complaints Asthmatic complaints Dyspnoea Extended inhalation at levels above the workplace limit value can cause irreversible damage to the lungs (silicosis).

4.3. Indication of any immediate medical attention and special treatment needed

Provide fresh air. In case of breathing difficulties administer oxygen.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media:** Water fog. High power water jet. Carbon dioxide (CO₂). Foam. dry extinguishing powder.
- Unsuitable extinguishing media:** none

5.2. Special hazards arising from the substance or mixture

none

5.3. Advice for firefighters

General information

Co-ordinate fire-fighting measures to the fire surroundings. The product itself does not burn. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Special protective equipment for firefighters:

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. Remove persons to safety.

6.2. Environmental precautions

No special environmental protection measures are necessary.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Avoid generation of dust. Treat the recovered material as prescribed in the section on waste disposal. Avoid generation of dust. Provide adequate ventilation.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid generation of dust. Do not breathe dust. Provide adequate ventilation as well as local exhaustion at critical locations.

Precautions against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

none

Hints on joint storage

Do not store together with: Explosive substances. Highly oxidising substances Infectious substances
Radioactive substances Keep away from food, drink and animal feedingstuffs.

Storage class: 13

7.3. Specific end use(s)

Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit value

Substance:	CAS-No.:		Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m ³]	Limitation of exposure peaks:	Remark:
alumina		GB	GESTI S - Internat ionale Grenzw erte		4 A-Staub 10 E-Staub		
		USA	GESTI S - Internat ionale Grenzw erte		5 A-Staub 15 E-Staub		
quartz		USA	GESTI S - Internat ionale Grenzw erte		0,05		

Substance with a common (EC) occupational exposure limit value

Substance:	CAS-No.:		Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:
quartz		EU	RICHT LINIE (EU) 2017/2 398		0,1 A-Staub		

DNEL-/PNEC-values

DNEL value

Substance:	CAS-No.:	DNEL/DMEL

PNEC Value

Substance:	CAS-No.:	PNEC

Remark:

AGS A: respirable fraction E: inhalable fraction

8.2. Exposure controls

Occupational exposure controls

Provide adequate ventilation as well as local exhaustion at critical locations. Technical measures and the application of suitable work processes have priority over personal protection equipment.

General protection and hygiene measures

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Apply skin care products after work. Wash contaminated clothing prior to re-use.

Personal protection equipment

Respiratory protection

Respiratory protection necessary at: dust formation Suitable respiratory protection apparatus: Particle filter device (DIN EN 143)

Hand protection

The use of resistant protective gloves is recommended. Skin protection creams do not offer as effective protection as protective gloves. Therefore, suitable protective gloves should be preferred as much as possible.

Suitable material: No information available.

Experience has shown that the following glove materials are suitable for protection against undissolved solids: CR (polychloroprene, chloroprene rubber), NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber), FKM (fluoro rubber), PVC (polyvinyl chloride).

Eye/face protection

Tightly sealed safety glasses.

Body protection

Body protection: not required.

Environmental exposure controls

refer to chapter 7. No further action is necessary.

Consumer exposure controls

refer to chapter 7. No further action is necessary.

Exposure Scenario

none

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:
 Physical state: Granulate
 Colour: white, grey, brown
 Odour: odourless
 Odour threshold: none

Safety relevant basis data

Parameter	Value	Unit	Remark
pH:			not applicable
Melting point/freezing point:	1705	°C	
Initial boiling point and boiling range:			No data available
Flash point:			none
Evaporation rate:			not applicable
Flammability (solid, gas):			none
Explosive properties:			not explosive.
Lower flammability or explosive limits:			not applicable
Upper flammability or explosive limits:			not applicable
Vapour pressure:			not applicable
Vapour density:			not applicable
Relative density:			not determined
Density:	2,5 - 3,5	g/cm ³	
Solubility(ies):	:		not applicable
Partition coefficient: n-octanol/water:			No data available
Auto-ignition temperature:			none
Decomposition temperature:			none
Viscosity:			not applicable
Metal corrosive properties			not determined
Oxidising properties:			Not oxidising.

9.2. Other information

Bulk density:			No data available
Water solubility:	< 3	%	practically insoluble
Fat solubility:			The study does not need to be conducted because the substance is known to be insoluble in water.
Solvent separation test:			not applicable
Solvent content:			not applicable
none			

SECTION 10: Stability and reactivity

10.1. Reactivity

none

10.2. Chemical stability

With proper storage and handling the product is stable.

10.3. Possibility of hazardous reactions

none

10.4. Conditions to avoid

none

10.5. Incompatible materials

Hydrogen fluoride.

10.6. Hazardous decomposition products

none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

There are no data available on the mixture itself.

Acute toxicity

Substance:	CAS-No.:	Toxicological information
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Skin corrosion/irritation

slightly irritant but not relevant for classification.

Serious eye damage/irritation

slightly irritant but not relevant for classification.

Respiratory or skin sensitisation

not sensitising.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

Category 1 (EU): Known to be carcinogenic to man.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

STOT-single exposure

none

STOT-repeated exposure

Extended inhalation at levels above the workplace limit value can cause irreversible damage to the lungs (silicosis).

Aspiration hazard

slightly irritant but not relevant for classification.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
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12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

none

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

none

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal/Product:

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

List of proposed waste codes/waste designations in accordance with EWC

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Waste code product: 10 09 05, 10 10 05

Waste code packaging: 15 01 10

SECTION 14: Transport information

14.1. UN number

UN No.: none

14.2. UN proper shipping name

ADR / RID

No dangerous good under transport regulations.

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IMDG / ICAO-TI / IATA-DGR

No dangerous good under transport regulations.

-

14.3. Transport hazard class(es)

Hazard label(s):: none

Classification Code:

none

14.4. Packing group

Packing Group: none

14.5. Environmental hazards

Labelling environmentally hazardous substances

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: yes / no
Marine Pollutant: yes / no

14.6. Special precautions for user

Land transport (ADR/RID)

Transport category: none

Special provisions: none

Tunnel restriction code: none

Limited quantity (LQ): none

Sea transport (IMDG)

EmS-No: none

Special provisions: none

Limited quantity (LQ): none

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Remark: none

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register:

The substance / mixture / product with its ingredients is not subject to the Regulation.

Regulation (EC) No 1005/2009 on substance that deplete the ozone layer:

The substance / mixture / product with its ingredients is not subject to the Regulation.

Regulation (EC) No 648/2004 on detergents:

The substance / mixture / product with its ingredients is subject to the Regulation.

Regulation (EC) No 850/2004 on persistent organic pollutants:

The substance / mixture / product with its ingredients is not subject to the Regulation.

Regulation (EU) No 649/2012 concerning the export and import of dangerous chemicals:

The substance / mixture / product with its ingredients is not subject to the Regulation.

Restrictions according to Title VIII of Regulation (EC) No 1907/2006:

not relevant

National regulations

Observe in addition any national regulations!

Restrictions of occupation

According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

Other regulations, restrictions and prohibition regulations

none

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out for this substance: -

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Relevant H- and EUH-phrases (Number and full text)

Hazard statements

H332 Harmful if inhaled.

Training advice

Make sure that employees are aware of the intoxication risk. People wearing breathing apparatus must be appropriately trained.

Recommended restrictions of use

refer to chapter 1.

Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Documentation of changes

none

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

none
