Morgan Advanced Materials

Molten Metal Systems

Safety Data Sheet

(Information provided in this SDS has been prepared by competent and appropriately qualified and trained persons in accordance with The Morgan Crucible Company plc compliance procedures. It meets the requirements of the following standards and regulations: American National Standard ANSI Z400.1-2004, Australia National Code of Practice NOHSC:2011(2003), European Council Regulation (EC) 1907/2006 Annex II, United Nations Globally Harmonized System for Classification and Labelling of Chemicals Annex 4 (2005), and USA OSHA Hazard Communication Standard.)

SDS No: C1 Rammable Conductive Lining - SiC/Graphite-based preparations	Date of First Issue: 31/01/2005 Date of Last Revision: 04/02/2010

Section 1 – Products and Suppliers

Identification of the Product: RCL

Use of the Product: Foundry Preparations used in the holding, melting & general handling & treatment of metals for casting & other heat treatment processes using induction furnaces

Suppliers and emergency contact information:

Morgan Molten Metal Systems GmbH	Morganite Crucible Inc	Morganite Crucible (India) Ltd	Morganite Brasil Ltd	Diamond Crucible Co Ltd	Morgan Molten Metal Systems (Suzhou) Co. Ltd.
Noltinastrasse 29	22 North Plains	Works B-11, MIDC	Av do Taboão, 3265	212-C, GIDC	No. 108, Tongsheng Rd Shengpu
D-37297	Ind. Estate, Unit 1	Waluj 431 136	São Bernardo do Campo	Mehsana 384 002	Suzhou Industrial Park
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	CT 06492		SP 09656-000		
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SDS enquiry dedicated email address: SDS@morganplc.com

Section 2 – Hazard Identification

Emergency overview:
The components of these products are not classified as hazardous according to REGULATION (EC) No 1907/2006.

Chronic health effects: none

Short-term exposure effects: none

Physical hazards: none

Potential hazards during use;

Once installed and commissioned, all preparations may release dust if products are abraded, broken or otherwise damaged through mishandling

Section 3 – Hazardous Components

Description: Pre-mixed Silicon carbide/graphite refractory preparations

Composition: The components of these product are not classified as hazardous according to REGULATION (EC) No 1907/2006.

COMPONENT	% by weight	EINECS number	CAS number	Symbol	R Phrases
Carbon	25-50	231-955-3	7782-42-5	N/A	N/A
Silicon Carbide	25-50	206-991-8	409-21-2	N/A	N/A
Silicon	5-15	231-130-8	7440-21-3	N/A	N/A
Alumina	2-10	215-691-6	1344-28-1	N/A	N/A
Glass Oxide	2.5-10	266-046-0	65997-17-3	N/A	N/A
Water	10-25	231-791-2	7732-18-5	N/A	N/A

Section 4 – First Aid Measures

Inhalation:

Symptoms of Exposure:	Dryness in throat or coughing due to exposure to respirable dust.
First Aid measures:	Remove to fresh air, if symptoms persist seek medical attention.

Skin Contact:

Symptoms of Exposure:	Drying of the skin after contact with wet material. Mechanical irritation to skin due to exposure to dust.
First Aid measures:	Remove contaminated clothing. Wash area of contact thoroughly with water. Seek medical attention.

Eye Contact:

Symptoms of Exposure:	Mechanical irritation to eyes due to exposure to wet material or dust.
First Aid measures:	Wash eyes immediately with large amounts of water. Do not rub eyes. Seek medical attention.

Ingestion:

Symptoms of Exposure:	Possible stomach problems due to ingestion of wet material or dust.
First Aid measures:	Seek medical attention.

Section 5 – Fire-fighting Measures

These products are non-flammable.
Packaging and surrounding materials may be combustible.
Use extinguishing agent suitable for packaging and other materials stored nearby.

Section 6 – Accidental Release Measures

Personal Precautions: Ensure good ventilation to area. Avoid creating airborne dust. Wear personal protective equipment as detailed in section 8.

Environmental Precautions: Clean up spillage or dust immediately. Ensure material does not enter drainage system.

Methods for cleaning up: Use wet sweeping or vacuuming to clean the work area, do not use compressed air or dry sweeping. If vacuuming, the vacuum cleaner should be equipped with a high efficiency particulate filter.

Section 7 – Handling and Storage

Handling: Take care not to damage packaging to avoid dry out of product as this may lead to a potential for dust generation. Take care to avoid damaging the product once installed as this may create dust.

Storage: Store in dry conditions away from strong heat sources.

Specific Use: For safe & efficient use of the product, working practices must comply with the recommendations described in the relevant product datasheet, available from the manufacturer.

Section 8 – Exposure Controls and Personal Protection

Exposure limits and guidelines (many jurisdictions have exposure limits and control guidelines for substances not listed elsewhere as hazardous - consult and comply with local regulations where they exist):

Exposure Limit Values:
Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure limits apply to your facility. In the absence of exposure information, or if no regulatory dust or other standards apply, the manufacturer recommends the control of respirable dust exposures to the UK limit for nuisance dusts of 4 mg/m^3/8hour time weighted average (TWA) or less.

Exposure Controls:
Review your working practices in order to identify potential sources of dust exposure. If necessary conduct personal air monitoring. Where technically and economically

feasible, use engineering controls. These may include local exhaust ventilation & equipment to remove airborne dust or materials.

Personal Protective Equipment:

Respiratory Protection:	Wear approved respirator when wrecking out used product if this may create dust concentrations above the exposure limit.
Hand Protection:	Wear protective gloves.
Eye Protection:	Wear safety glasses with side shields or other appropriate forms of eye protection.
Skin Protection:	Wear safety shoes and appropriate work overalls when handling the product prior to use. Wear foundry grade protective garment and safety shoes when using the product.

Section 9 – Physical and Chemical Properties

Appearance:	Black or Grey Powder
Odour:	None
pH:	Not applicable
Melting/Boiling Point:	Not applicable
Flash Point:	Non-flammable
Density Range:	1.0-1.7 gcm^{-3} as supplied, 1.6-2.5 gcm^{-3} installed
Water Solubility:	Low solubility in water

Section 10 – Stability and Reactivity

Chemical Stability:	Stable under conditions of normal use
Conditions to Avoid:	Rapid heating of damp material from Incomplete or inadequate dry out during commissioning
Materials to Avoid:	None
Hazardous Decomposition Products:	When using fluxes & other metallurgical treatment chemicals with the product,

chemical decomposition of the product is possible. Refer to recommendations from the specific treatment chemical manufacturer.

Section 11 – Toxicological Information

Inhalation: No known effect. Dust generated from damaged product may contain small amounts of crystalline silica. Crystalline silica is present as a natural impurity in some of the product components, and may be generated in small quantities within the product during extended use above 900°C. Long term exposure to respirable crystalline silica may cause lung disease, including silicosis, and an increased risk of developing lung cancer.

Skin Contact: No known effect. Possible mechanical irritant effect of dust generated during installation or from damaged product.

Eye Contact: No known effect. Possible mechanical irritant effect of dust generated during installation or from damaged product.

Ingestion: No known effect.

Section 12 – Ecological Information

These products are inert materials, which remain stable over time.

No ecological concerns have been identified or are anticipated.

Section 13 – Disposal Considerations

Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

Contamination during use or chemical additions to the product may alter the disposal requirements.

Section 14 – Transport Information

Not classified as dangerous goods under IMDG (sea), ADR (road), RID (rail), or ICAO/IATA (air) regulations. Consult local, regional, state or provincial regulations.

Section 15 – Regulatory Information

There are no known local, national or international regulations or restrictions that apply to the manufacture, use or disposal of these products. Consult local authorities if additional information is required.

Section 16 – Other Information

For best performance & recommended handling & storage practices refer to the relevant product datasheet, available from the manufacturer.

Reasonable care has been taken in the preparation of information contained in this Safety Data Sheet, and the information is provided in good faith. Morgan Carbon Division assumes no responsibility as to the accuracy of information drawn from the stated sources. No warranty, expressed or implied, is made.