

SAFETY DATA SHEET

(Following Regulations (EC) No 1907/2006 & (EC) No 1272/2008)

SDS Number: 659 Date of first issue: 05 January 2021 Date of last revision: 21 February 2022

1 - Identification of product

1.1 - Identification of Product

Tradenames: SWK44,

The above mentioned products are mortars.

1.2 - Use of Product

Application as high temperature processing, lining of industrial furnaces, thermal insulation of kilns, etc... (Please refer to specific technical data sheet for more information).

1.3 - Identification of Company

IDENTIFICATION OF THE MANUFACTURER/SUPPLIER

Murugappa Morgan Thermal Ceramics Ltd.,
Plot No: 26 & 27, SIPCOT Industrial complex,
Ranipet, Vellore District, Tamil Nadu, India
Pin: 632403

Murugappa Morgan Thermal Ceramics Ltd.,
Plot No: 681, Motibhojan Village,
Sanand-Kalol state Highway, Kalol Taluk,
Gandhi Nagar District, Gujarat, India

Website

Website : www.morganthermalceramics.com

Email : sds.tc@morganplc.com

1.4 - Emergency information

EMERGENCY CONTACT NUMBER

Tel 1: +91 (4172) 244 313 extn no. 215 or 201
Language: English

Opening hours: Only available during office hours

2 - Hazard Identification

2.1 - Classification of the substance/ mixture

2.1.1 CLASSIFICATION ACCORDING TO REGULATION (EC) NO 1272/2008
Not classified as hazardous according to Classification, Labelling and Packaging regulations (CLP) 1272/2008 EEC

Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

2.2 - Labelling Elements

2.2.1 LABELLING ELEMENTS ACCORDING TO REGULATION (EC) NO 1272/2008

Hazard pictogram: NONE
Signal Word: NONE

Hazard statements: EUH208: Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

2.3 - Other hazards which do not result in classification

The product does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006

The product does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006

3 - Composition / Information On Ingredients

Substance	CAS/ EINECS Number	Hazard Classification	Range
Fused Silica	99439-28-8	Not classified	40-60
China clay	1332-58-7	Not classified	5-15
Volatilised/fumed silica	69012-64-2	Not classified	0-10
potassium silicate powder	1312-76-1	Eye Irritant 2, Skin Irritant 2, STOT SE 3	<0.5
Other organic components	Not applicable	Not classified	<1
1,2-benzisothiazol-3(2H)-one	2634-33-5	Eye damage 1, aquatic acute 1, aquatic chronic <0.05 1, skin sens 1	
Water			30-50

None of the components are radioactive under the terms of European Directive Euratom 96/29.

4 - First-Aid measures

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

After eye contact: Rinse opened eye for several minutes under running water (at least 15 minutes). If symptoms persist, consult a doctor.

Nose and Throat

If these become irritated move to a dust free area, drink water and blow nose. Seek medical attention if irritation persists.

If symptoms persist, seek medical advice.

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

Allergic skin reactions

4.3 - Indication of any immediate medical attention and special treatment required

Treat skin and mucous membrane with antihistamine and corticoid preparations. Rinse eyes thoroughly with physiological saline.

5 - Fire-fighting measures

5.1 - Extinguishing media

Non-combustible products. Fire protection class: 0

Packaging and surrounding materials could be combustible.

Use extinguishing agent suitable for surrounding combustible materials.

5.2 - Special hazards arising from the substance or mixture

Non-combustible products,

5.3 - Advice for firefighters

In case of fire involving virgin materials do not breathe fumes

Use protective respirator with independent air supply.

Dispose of contaminated extinction water according to official regulations

6 - Accidental Release Measures

6.1 - Personal precautions, protective equipment and emergency procedures

Wear suitable goggles, gloves and protective clothing.

6.2 - Environmental precautions

Do not allow to enter sewers / surface or ground water.

6.3 - Methods and materials for containment and clean up

Contain spillage, absorb in earth or sand and shovel into suitable containers

6.4 - Reference to other sections

For further information, please refer to sections 7 and 8

7 - Handling and storage

7.1 - Precautions for safe handling

Handling of dried product can be a source of dust emission and therefore the processes should be designed to limit the amount of handling. Whenever possible, handling should be carried out under controlled conditions (i.e., using dust exhaust system).

Regular good housekeeping will minimise secondary dust dispersal.

7.2 - Conditions for safe storage

Store in dry and cool condition.

Avoid storage in temperature lower than +5°C (risk of solidification) or above +40°C.

Avoid damaging the packaging and keep closed when not in use.

7.3 - Specific end use

Please refer to your local Morgan Thermal Ceramics' supplier.

8 - Risk Management Measures / Exposures Controls / Personal Protection

8.1 - Control parameters

Removing dried material after use may generate respirable dust.

Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection.

Examples of national OELs (November 2014) are given in the table below. Additional references and/or updates can be found on the following websites:

http://www.dguv.de/ifa/en/gestis/limit_values

<http://osha.europa.eu/en/publications/reports/548OELs/view>

COUNTRY	Total Dust (mg/m ³)	Resp Dust (mg/m ³)	Quartz (mg/m ³)	Cristobalite (mg/m ³)	Source
Denmark	10	5	0.10	0.05	Direktoratet for Arbejdstilsynet
Finland	No limit	No limit	0.20	0.10	National Board of Labour Protection
France	10	5	0.10	0.05	Ministère du Travail
Germany*	10	1.25	No limit	No limit	Bundesministerium für Arbeit
Italy	10	3	0.025	0.025	Associazione Italiana Degli Igienisti Industriali
Netherlands	10	5	0.075	0.075	Ministerie van Sociale Zaken en Werkgelegenheid
Norway	10	5	0.10	0.05	Direktoratet for Arbejdstilsynet
Poland	No limit	No limit	0.30	0.30	
Romania	10	10	0.10	0.05	Government Decision n° 1093/2006 regarding carcinogenic agents
Spain	10	3	0.10	0.05	ITC/2585/2007
Sweden	10	5	0.10	0.05	National Board of Occupational Safety and Health
UK	10	4	0.10	0.10	EH40/2005

*Germany does not have a limit for crystalline silica, exposure must be minimised as far as possible.

Information on monitoring procedures

United Kingdom

MDHS 14/4 - "General methods for sampling and gravimetric analysis of respirable, thoracic and inhalable aerosols"

MDHS 101 - "Crystalline silica in respirable airborne dusts"

NIOSH

NIOSH 0500 "Particulates not otherwise regulated, total"

NIOSH 0600 "Particulates not otherwise regulated, respirable"

NIOSH 7500 "Silica, Crystalline, by XRD (filter redeposition)"

8.2 - Exposure controls

8.2.1 APPROPRIATE ENGINEERING CONTROLS

Review your applications in order to identify potential sources of dust exposure.

Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and materials handling equipment.

Keep the workplace clean. Use a vacuum cleaner. Avoid brushing and compressed air.

If necessary, consult an industrial hygienist to design workplace controls and practices.

The use of products specially tailored to your application(s) will help to control dust. Some products can be delivered ready for use to avoid further cutting or machining. Some could be pre-treated or packaged to minimise or avoid dust release during handling.

Consult your supplier for further details

8.2.2 - Personal Protective Equipment

Skin protection:

Use of gloves and work clothes is recommended.

Soiled clothes should be cleaned before being taken off (e.g. use vacuum cleaning, not compressed air).

Eye protection:

As necessary wear goggles or safety glasses with side shields.

Respiratory protection:

For dust concentrations below the exposure limit value, RPE is not required but FFP2 respirators may be used on a voluntary basis.

For short-term operations where excursions are less than ten times the limit value use FFP2 respirators.

In case of higher concentrations or where the concentration is not known, please seek advice from your company and/or local Thermal Ceramics' supplier.

INFORMATION AND TRAINING OF WORKERS

Workers should be trained on good working practices and informed on applicable local regulations

8.2.3 - Environmental Exposure Controls

Refer to local, national or European applicable environmental standards for release to air water and soil.

For waste, refer to section13

9 - Physical and chemical properties

Information on basic physical and chemical properties	Not applicable
State	Grey paste
Colour	Grey
Odour	None
Odour threshold	Not Applicable
pH	Not applicable
Melting point/freezing point	Not determined
Initial boiling point and boiling point range	Not applicable
Flash point	Not applicable
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not Applicable
Relative density	Not applicable
Solubility(ies)	Slight
Partition co-efficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Other safety information	Not applicable
Particle Characteristics	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable

10 - Stability and Reactivity

10.1 - Reactivity

10.2 - Chemical Stability

The product is inorganic, stable and inert

10.3 - Possibility of Hazardous Reactions

None

10.4 - Conditions to Avoid

Please refer to handling and storage advice in Section 7

10.5 - Incompatible Materials

None

10.6 - Hazardous decomposition products

11 - Toxicological information

Toxicokinetics, metabolism and distribution

11.1.1 BASIC TOXICOKINETICS

As manufactured, these products contain a minimal amount of respirable crystalline silica.

Exposure is predominantly by skin contact, inhalation or ingestion, available toxicological information is as follows:

11.1.2 Human Toxicological data

Epidemiology for crystalline silica

Prolonged/repeated inhalation of respirable crystalline silica dust may cause delayed lung injury (silicosis).

In evaluating crystalline silica as a cancer risk, the International Agency for Research on Cancer (IARC) reviewed several studies from different industries and concluded that crystalline silica from occupational sources inhaled in the form of quartz or cristobalite is carcinogenic to humans (Group 1) [IARC Monograph; vol.68; June 1997]. However, in reaching its conclusion, IARC stated that the carcinogenicity in humans could not be found in all industries reviewed and that carcinogenicity might be dependent on inherent characteristics of crystalline silica or on external factors affecting biological activity (e.g., cigarette smoking) or distribution of its polymorphs.

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

- (a) acute toxicity; Based on available data, the classification criteria are not met.
- (b) skin corrosion/irritation; Based on available data, the classification criteria are not met.
- (c) serious eye damage/irritation; mixture not tested
- (d) respiratory or skin sensitisation; May cause an allergic skin reaction.

Results of studies: 1,2-benzisothiazol-3(2H)-one

OECD 406 (MKA) (Guinea pig) sensitising - S 2220

OECD 429 (LLNA) (mouse) sensitising - S 523

- (e) germ cell mutagenicity; Based on available data, the classification criteria are not met.
- (f) carcinogenicity; Based on available data, the classification criteria are not met.
- (g) reproductive toxicity; Based on available data, the classification criteria are not met.
- (h) STOT-single exposure; Based on available data, the classification criteria are not met.
- (i) STOT-repeated exposure; Experimental Studies for Crystalline Silica

Animals exposed to very high concentrations of crystalline silica, artificially or by inhalation, have reported fibrosis and tumours (IARC Monographs 42 and 68).

Inhalation and intratracheal installation of crystalline silica in rats caused lung cancer. However, studies in other species such as mice and hamsters caused no lung cancer. Crystalline silica also caused fibrosis in rats and hamsters in several inhalation and intratracheal installation studies.

- (j) aspiration hazard. Based on available data, the classification criteria are not met.

12 - Ecological information

12.1 - Toxicity

These products are inert materials that remain stable overtime.
No adverse effects of this material on the environment are anticipated.

12.2 - Persistence and degradability

Not established

12.3 - Bioaccumulative potential

Not established

12.4 - Mobility in soil

No information available

12.5 - Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulative (vPvB).

12.6 - Endocrine Disrupting Properties

No additional information available

12.7 - Other adverse effects

13 - Disposal Considerations

13.1 - Disposal Considerations

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.

Waste from these materials (even after use above 900°C) is not generally classified as hazardous waste and may be disposed of at a normal tipping site which has been licensed for the disposal of industrial waste. Taking into account any possible contamination during use, which may be classified as hazardous, expert guidance should be sought.

Such a waste is normally dusty (unless wetted) and so should be properly bagged and clearly labelled for disposal. At some tip sites dusty waste may be treated differently in order to ensure they are dealt with promptly and to avoid them being windblown.

Check for national and /or regional regulations to identify all applicable disposal requirements.

14 - Transport information

14.1 - Transport information

Not classified as dangerous goods under relevant international transport regulations (Australian DG Code, ADR, RID, IATA, and IMDG).
Ensure that dust is not windblown during transportation.

UN Number None Allocated
DG Class None Allocated
Subsidiary risk(s) None Allocated
Packing Group None Allocated
Hazchem Code None Allocated

Definitions:

ADR Transport by road, council directive 94/55/EC
IMDG Regulations relating to transport by sea
RID Transport by rail, Council Directive 96/49/EC
ICAO/IATA Regulations relating to transport by air
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

15 - Regulatory information

15.1 - Regulatory information

The International Agency for Research on Cancer (IARC) confirmed in October 2001 that Group 2B (possible human carcinogen based on sufficient evidence of carcinogenicity in animals but inadequate evidence in humans) continues to be the appropriate classification for refractory ceramic fibre.

INFORMATION FOR RCF USERS EXPORTING TO EUROPE

Under European Regulation REACH there are additional obligations for importers of RCF containing products

RCF are classified in the European Union as a carcinogenic substance CLP 1B. On the 13th of January 2010 ECHA has updated the candidate list for authorisation (Annexe XV of the REACH regulation) and has added 14 new substances in this list including Refractory Ceramic Fibres and zirconia Refractory Ceramic Fibres.

As a consequence, EU (European Union) or EEA (European Economical Area) suppliers of articles which contain Refractory Ceramic Fibres and zirconia Refractory Ceramic Fibres in a concentration above 0.1% (w/w) have an obligation to provide information, available to them, to their customers or upon a request from an end user, within 45 days of the receipt of the request, on the supply of RCF containing articles,. This information must ensure safe use of the article and as a minimum contain the name of the substance. See section 16 for internet reference containing further information.

16 - Other Information

16.1 - ADDITIONAL INFORMATION AND PRECAUTIONS TO BE CONSIDERED UPON REMOVAL OF AFTER SERVICE MATERIAL

This cement is used as cement for Ceramic fibre. Optimal safety equipment for these fibre products should be used when working with the cement.

High concentrations of dust may be generated when after-service products are mechanically disturbed during operations such as wrecking, it is recommended that: a)- control measures are taken to reduce dust emissions and b)- all personnel directly involved wear an adapted respirator to minimise exposure and comply with local regulatory limits.

16.2 - uses advised against

16.3 - NOTE

This Safety Data Sheet was originally produced in English and has subsequently been translated in to other languages; whilst every effort has been made to make this an accurate translation, please be aware that technical terms do not always translate correctly. The English version should always be considered as the reference version.

16.4 - Further Information

FURTHER INFORMATION

Further information can be found on

<http://www.morganthermalceramics.com/>

<http://www.cdc.gov/niosh/docs/2006-123/>

<http://www.ecfia.eu/>

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_obligations_en.asp

16.5 - Technical Datasheets

TECHNICAL DATA SHEETS

For more information on individual products please see the technical data sheet section at www.morganthermalceramics.com

16.6 - Revision Summary

New Safety Data Sheet

16.7 - NOTICE

The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.