

## SAFETY DATA SHEET

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

SDS Number: 645      Date of first issue: 22 June 2015      Date of last revision: 21 February 2022

### 1 - Identification of product

#### 1.1 - Identification of Product

**Tradenames:** Firelite 105R,

The above mentioned products are very light insulating concretes.

#### 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, Motibhoyan Village,  
Sanand-Kalol state Highway, Kalol Taluk,  
Gandhi Nagar District, Gujarat, India

#### Website

www.morganthermalceramics.com  
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

Classified as category 1 damaging to eyes, category 2 skin irritant, category 3 respiratory irritant and category 1 skin sensitizer

#### 2.2 - Labelling Elements

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



Hazard pictogram: GHS05  
Signal Word: Danger  
Hazard statements:  
H315: Causes skin irritation  
H318: Causes serious eye damage  
H317: May cause an allergic skin reaction  
H335: May cause respiratory irritation

#### Precautionary Statements

P280: Wear protective gloves/protective clothing/eye protection/  
face protection.

P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

P362 + P352 + P333 + P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

P261 + P304 + P340 + P312: Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

P501: Dispose of contents/container to in accordance with local requirements

#### 2.3 - Other hazards which do not result in classification

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure.  
These effects are usually temporary.

When mixed with water, an increase in pH will occur. Alkaline mix may be irritating to skin and could cause damage to eyes.

### 3 - Composition / Information On Ingredients

These products are very light weight grey concretes.

| COMPONENT                    | %     | CAS Number     | REACH Registration Number | Hazard Classification according to CLP |
|------------------------------|-------|----------------|---------------------------|--|
| Cement                       | 20-30 | 65997-15-1     | Not yet available         | H315, H317, H318, H335                 |
| Cement                       | 20-30 | 65997-16-2     | Not yet available         | Not classified as hazardous            |
| Anorthite                    | 20-30 | Not Applicable | Not yet available         | Not classified as hazardous            |
| Bentonite                    | <5    | 1302-78-9      | Not yet available         | Not classified as hazardous            |
| Other inert mineral material | 10-20 | Not Applicable | Not yet available         | Not classified as hazardous            |

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

### 4 - First-Aid measures

- Skin**  
In case of skin irritation rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.
- Eyes**  
In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes. Seek medical attention if irritation persists.
- 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

No symptoms or effects expected either acute or delayed

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

No special treatment required, if exposure occurs wash exposed areas to avoid irritation.

### 5 - Fire-fighting measures

#### 5.1 - Extinguishing media

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

Packaging and surrounding materials may be combustible.

### 6 - Accidental Release Measures

#### 6.1 - Personal precautions, protective equipment and emergency procedures

Where abnormally high dust concentrations occur, provide the workers with appropriate protective equipment as detailed in section 8. Restore the situation to normal as quickly as possible.

#### 6.2 - Environmental precautions

Prevent further dust dispersion for example by damping the materials.  
Do not flush spillage to drain and prevent from entering natural watercourses.  
Check for local regulations, which may apply

#### 6.3 - Methods and materials for containment and clean up

Pick up large pieces and use a vacuum cleaner.  
If brushes are used, ensure that the area is wetted down first.  
Do not use compressed air for clean up.  
Do not allow to become windblown.

#### 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 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 original packaging in dry area whilst awaiting use  
Avoid damaging packaging.  
Recyclable cardboard and/or plastic films are recommended for packaging.

#### 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://www.dguv.de/ifa/en/gestis/limit_values)

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

| COUNTRY     | Total Dust (mg/m <sup>3</sup> ) | Resp Dust (mg/m <sup>3</sup> ) | Quartz (mg/m <sup>3</sup> ) | Cristobalite (mg/m <sup>3</sup> ) | 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"

NIOSH

NIOSH 0500 "Particulates not otherwise regulated, total"

NIOSH 0600 "Particulates not otherwise regulated, respirable"

### 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

|  |  |
|--|--|
| <b>Information on basic physical and chemical properties</b> | Not applicable                             |
| <b>State</b>   | Mix of grey aggregates and fine powders    |
| <b>Colour</b>  | Grey                                       |
| <b>Odour</b>   | None                                       |
| <b>Odour threshold</b>                                       | Not applicable                             |
| <b>pH</b>  | Not applicable                             |
| <b>Melting point/freezing point</b>                          | > 1000°C                                   |
| <b>Initial boiling point and boiling point range</b>         | Not applicable                             |
| <b>Flash point</b>   | Not applicable                             |
| <b>Evaporation rate</b>                                      | Not applicable                             |
| <b>Flammability (solid, gas)</b>                             | Not applicable                             |
| <b>Upper/lower flammability or explosive limits</b>          | Not applicable                             |
| <b>Vapour pressure</b>                                       | Not applicable                             |
| <b>Vapour density</b>  | Not applicable                             |
| <b>Relative density</b>                                      | 600-800 kg/m <sup>3</sup>                  |
| <b>Solubility(ies)</b>                                       | Not applicable                             |
| <b>Partition co-efficient: n-octanol/water</b>               | Not applicable                             |
| <b>Auto-ignition temperature</b>                             | Not applicable                             |
| <b>Decomposition temperature</b>                             | Not applicable                             |
| <b>Viscosity</b>   | Not applicable                             |
| <b>Other safety information</b>                              | No further relevant information available. |
| <b>Particle Characteristics</b>                              | Not applicable                             |
| <b>Explosive properties</b>                                  | Not applicable                             |
| <b>Oxidising properties</b>                                  | Not applicable                             |

## 10 - Stability and Reactivity

### 10.1 - Reactivity

The product is stable

### 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

Upon heating above 900°C for sustained periods, this amorphous material begins to transform to mixtures of crystalline phases. For further information please refer to Section 16.

## 11 - Toxicological information

### Toxicokinetics, metabolism and distribution

#### 11.1.1 BASIC TOXICOKINETICS

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

Exposure is predominantly by 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

##### 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.

##### ACUTE TOXICITY

Lethal dose 50 % (LD50) / lethal concentration 50% (LC50): N.A.

## 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

## 14 - Transport information

### 14.1 - Transport information

#### 14.1. UN number

Not Applicable

#### 14.2. UN proper shipping name

Not Applicable

#### 14.3. Transport hazard class(es)

Not Applicable

#### 14.4. Packing group

Not Applicable

#### 14.5. Environmental hazards

Not Applicable

#### 14.6. Special precautions for user

Not Applicable

#### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

## 15 - Regulatory information

### 15.1 - Regulatory information

This SDS has been prepared in accordance with WHO GHS rev. 6 requirements. Where applicable, local regulations have been followed.

## 16 - Other Information

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

### 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.ecfia.eu/>

<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/workplace-exposure-standards-airborne-contaminants>

### 16.5 - Technical Datasheets

### 16.6 - Revision Summary

Content checked and revision date updated

### 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.