



SAFETY DATA SHEET

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

SDS Number: 1002 Date of first issue: 15 July 2013 Date of last revision: 21 February 2022

1 - Identification of product

1.1 - Identification of Product

Tradenames: Cerapreg,

This product contains ethylene glycol
EC Number: 203-473-3 of Annex VI
CAS Number: 107-21-1
Index Number: 603-027-00-1

1.2 - Use of Product

This product is used to produce a hard surface finish

1.3 - Identification of Company

IDENTIFICATION OF THE MANUFACTURER/SUPPLIER

Morgan Advanced Materials
Thermal Ceramics
30-36 Birralee Road, Regency Park, SA 5010, Australia
Telephone: 1800 467 858
Fax: 1800 467 850

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 Classification of the substance/mixture
This mixture is not classified

2.1.1 Classification according to regulation (EC) No 1272/2008
Ethylene Glycol is classified as follows: Acute Toxicity, Oral (Category 4)

2.2 - Labelling Elements

Not applicable

2.3 - Other hazards which do not result in classification

Chronic Respiratory Health Effects for Ethylene Glycol
NIOSH recently described evidence that ethylene glycol has potential reproductive hazards by inhalation of ethylene glycol mist

3 - Composition / Information On Ingredients

This product is a hardener for refractories

COMPONENT	%	CAS Number	REACH Registration Number	Hazard Classification according to CLP
Water	70-90	7732-18-5	Not yet available	Not classified
Aluminosilicate	10	Not Applicable	Not yet available	Not classified
Colloidal Silica	10	7631-86-9	01-2119379499-16	Not classified
Ethylene glycol	0-2	107-21-1	01-2119456816-28	Acute Tox 4 (H302)

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

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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

When material is wet use gloves, boots and rubber protection clothes when cleaning up
Where abnormally high dust concentrations occur, provide workers with appropriate protective equipment as detailed in section 8.

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 a dry area.
Avoid storage below +5°C.
Avoid damaging the 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

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.

COUNTRY	Total Dust (mg/m3)	Resp Dust (mg/m3)	Ethylene Glycol (mg/m3)	Source
Austria	10	6	No limit	Grenzwertverordnung
Belgium	10	3	52	Valeurs limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Denmark	10	5	10	Grænseværdier for stoffer og materialer
Finland	No limit	No limit	50	Finnish Ministry of Social Affairs and Health
France	10	5	52	Institut National de Recherche et de Sécurité
Germany*	10	1.25	26	TRGS 900
Hungary	No limit	No limit	53	<i>EüM-SZCSM rendelet</i>
Ireland	10	4	10	HAS – Ireland
Italy	10	3	52	Uses EU values
Luxembourg	10	6	No limit	Agents Chimiques, Cancérigènes Ou Mutagènes Au Travail
Netherlands	10	5	10	SER
Norway	10	5	10	Veiledning om administrative normer for forurensning i arbeidsatmosfære
Poland	No limit	No limit	15	Dziennik Ustaw 2010
Spain	10	3	52	INSHT
Sweden	10	5	25	AFS 2005:17
Switzerland	10	6	26	SUVA - <i>Valeurs limites d'exposition aux postes de travail</i>
UK	10	4	10	EH40/2005

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

Information on basic physical and chemical properties	Not Applicable
State	White liquid (clear to opalescent)
Colour	Not applicable
Odour	None
Odour threshold	Not Applicable
pH	9.7
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	UNKNOWN
Solubility(ies)	Not applicable
Partition co-efficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Other safety information	No further relevant information available.
Particle Characteristics	Not applicable
Explosive properties	Not applicable
Oxidising properties	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

None

11 - Toxicological information

Toxicokinetics, metabolism and distribution

Acute Toxicity of Ethylene Glycol

Lethal dose 50 % (LD50) / lethal concentration 50% (LC50): Oral 4700mg/kg / lethal concentration 50% (LC50): Inhalation >200mg/m³: 4H

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

EXPERIMENTAL STUDIES FOR ETHYLENE GLYCOL

Ethylene glycol toxicity by ingestion includes kidney effects with oxalate crystal deposition and liver damage. By inhalation exposure, lung changes and irritation of mucosal surfaces occurred in rats. A slight effect on reproduction was seen in mice administered 2000 mg/kg/day in their drinking water. During the studies with pregnant animals where high doses of ethylene glycol have been administered, foetal and maternal toxicity was observed.

Acute Toxicity of Ethylene Glycol

Lethal dose 50 % (LD50) / lethal concentration 50% (LC50): Oral 4700mg/kg / lethal concentration 50% (LC50): Inhalation >200mg/m³: 4H

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.

For Australia, waste from these materials should be considered as hazardous waste and local waste authorities should be contacted for correct disposal methods.

For other countries, waste from these materials (even after use above 900°C) is not classified as hazardous waste and may generally 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

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

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

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

Update to section 8.

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.