

SAFETY DATA SHEET

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

SDS Number: 705 Date of first issue: 29 June 2021 Date of last revision: 21 February 2022

1 - Identification of product

1.1 - Identification of Product

Tradenames: WDS LambdaFlex, WDS LambdaFlex Super, WDS SuperFlex ,

1.2 - Use of Product

Relevant identified uses of the substance or mixture:

Insulating material

Sector of use [SU]: SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Uses advised against:

No information available at present

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

Tel: + 44 (0) 7931 963 973
 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

2.2 - Labelling Elements

No labelling required as product is considered an article under REACH and CLP regulations.

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

COMPONENT	%	CAS Number	REACH Registration Number	Hazard Classification according to CLP
Silica	30-60	112945-52-5	Not yet available	Not classified
Alumina	10-30	1344-28-1	01-2119817795-27	Not classified
Zirconium	20-50	14940-68-2	Not yet available	Not classified
Silca Fibre	0-5	N/A	Not yet available	Not classified

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

Typically no exposure pathway.

If symptoms persist, seek medical advice.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

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. However, virgin product encapsulation may burn and produce gases and/or fumes.

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

Avoid build up of dust

6.2 - Environmental precautions

Normally not necessary

6.3 - Methods and materials for containment and clean up

Pick up mechanically and dispose of according to Section 13

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

Avoid build up of dust

Eating, drinking, smoking as well as food storage is prohibited in the work-room.

General hygiene measures for handling of chemicals are applicable

Wash hands before breaks and at end of work

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 - Conditions for safe storage

Store in original packaging in a dry area.

Always use sealed and clearly labelled containers.

Avoid damaging containers.

Reduce dust emission during unpacking.

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/m ³)	Resp Dust (mg/m ³)	Amorphous Silica (total) (mg/m ³)	Amorphous Silica (resp) (mg/m ³)	Aluminium Oxide (total) (mg/m ³)	Zirconium compounds (resp) (mg/m ³)	Source
India	10	-	-	-	5		Directorate General Factory Advice Service & Labour Industries (DFGASLI)
China	8	-	1	0.7			GBZ 2.1-2019
Japan	8	4	2	1	2	1	The Japan Society for Occupational Health (JSOH)
South Korea	10	-	10	0.1	10	5	K-OSHA Value
UAE	10	2	10	3	-	5	Abu Dhabi Occupational Safety and Health System Framework (OSHAD-SF) v 3.0 July 2016
Australia	10	2	10	2	10	10	Workplace Exposure Standards for Airborne Contaminants, Dec 2019

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

Eye/face protection:

Normally not necessary

Skin protection:

Normally not necessary

If applicable leather gloves and protective working garments (e.g. safety shoes, long-sleeved protective working garments)

Respiratory protection:

Normally not necessary

If OEL's are exceeded, if applicable, filter P2 (EN143), observe wearing time limitations for respiratory protection equipment.

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 solid
Colour	Not applicable
Odour	None
Odour threshold	Not Applicable
pH	Not applicable
Melting point/freezing point	> 1200°C
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	150-600 kg/m ³
Solubility(ies)	Not soluble in water
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

The material is stable and non reactive.

10.2 - Chemical Stability

Stable under normal temperature conditions.

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

Products with encapsulation (PE foil, glass cloth), will, on initial heating above 150°C, release a limited quantity of carbon dioxide, carbon monoxide and traces of other organic compounds. During this initial heating any organic components in the encapsulation will be burned off and subsequent heating will not release any hazardous decomposition materials.

11 - Toxicological information

Toxicokinetics, metabolism and distribution

11.1.1 BASIC TOXICOKINETICS

Exposure is not expected during normal use due to nature of the products, exposure during removal may be possible, predominantly by inhalation or ingestion, available toxicological information is as follows:

11.1.2 HUMAN TOXICOLOGICAL DATA

No clear evidence of lung problems is attributable to exposure to alumina particles in spite of widespread and, in some cases, substantial exposure in various sectors of industry.

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

ACUTE TOXICITY

Lethal dose 50 % (LD50) >5000 mg/kg Rat OECD 401 (acute oral toxicity)

Lethal concentration 50% (LC50): 7.6 mg/l/1h Rat OECD 403 (acute inhalation toxicity)

EXPERIMENTAL STUDIES

In animal studies, no fibrosis or other lung effects was observed following repeated inhalation exposure levels of 20 mg/m³ and above. Although some absorption may occur from inhaled particles, there is no evidence that this is sufficient to cause systemic effects and any link with Alzheimer's disease is considered to be remote.

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

Waste from these materials may be generally disposed off at a landfill, which has been licensed for this purpose. Please refer to the European list (Decision N° 2000/532/CE as modified) to identify your appropriate waste number, and ensure national and/or regional regulations are complied with.

Unless wetted, such a waste is normally dusty and so should be properly sealed in containers for disposal. At some authorised disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being windblown. Check for any national and/or regional regulations, which may apply.

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

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