SAFETY DATA SHEET

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

SDS Number: 725 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 Ultra H,

1.2 - Use of Product

Application as thermal insulation. (Please refer to specific technical data sheet for more information)

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
Classified as category 2 Causes serious eye damage / eye irritation

2.2 - Labelling Elements

Hazard pictogram (CLP):

Signal Word: Warning
Hazard statements: H319: Causes serious eye irritation

Precautionary Statements
P264: Wash contaminated skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/ face protection.
P305 + P351 + P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337 +P313: If eye irritations persists: Get Medical advice / attention.

2.3 - Other hazards which do not result in classification

3 - Composition / Information On Ingredients

COMPONENT	%	CAS Number	REACH Registration Number	Hazard Classification according to CLP
Fumed Silica	50-70	7631-86-9	Not yet available	Not classified
Silicon Carbide	10-30	409-21-2	Not yet available	Not classified
Calcium Silicate	10-30	10101-39-0	Not yet available	H319 - causes serious eye irritation
Silica Fibre	<10	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 is 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

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

Normally not necessary

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.
Always use sealed and clearly labelled containers.
Avoid damaging containers.
Reduce dust emission during unpacking.

7.3 - Specific end use

The main application of these products is as thermal insulation. 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)	Silicon Carbide (total) (mg/m^3)	Source
India	10	-	-	-		Directorate General Factory Advice Service & Labour Industries (DFGASLI)
China	8	-	1	0.7		GBZ 2.1-2019
Japan	8	4	2	1	4	The Japan Society for Occupational Health (JSOH)
South Korea	10	-	10	0.1	10	K-OSHA Value
UAE	10	2	10	3	10	Abu Dhabi Occupational Safety and Health System Framework (OSHAD-SF) v 3.0 July 2016
Australia	10	2	10	2	10	Workplace Exposure Standards for Airbourne 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/m3
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.

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

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

14 - Transport information

14.1 - Transport information

15 - Regulatory information

15.1 - Regulatory 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

16.4 - Further Information

16.5 - Technical Datasheets

16.6 - Revision Summary

16.7 - NOTICE