

## SAFETY DATA SHEET

According to Regulations (EC) No 1907/2006 amended by Regulation (EC) 2020/878

SDS No. DE001

Effective Date: 05/08/2022

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Product form	Substance
Trade name	CCEWOOL® REFRACTORY CERAMIC FIBER
Chemical name	Aluminosilicate refractory ceramic fibres
Index No	650-017-00-8
CAS No	142844-00-6
REACH registration No	01-2119458050-50-0006

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	For industrial high temperature insulating applications
Uses advised against	No additional information available

#### 1.3 Details of the supplier of the safety data sheet

DOUBLE EGRET THERMAL INSULATION CO.,LTD  
Minying Industrial Park Development Zones Zibo, Shandong, 255000  
Tel: 0086 533 7986 860

#### 1.4 Emergency telephone number

Tel: 0086 533 7986 860  
Email: info@ccewool.com  
Language: English; Opening hours: available during office hours

### 2. Hazards identification

#### 2.1 Classification of the substance/ mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]  
Carcinogenicity (inhalation) Category 1B H350i  
Full text of H- and EUH-statements: see section 16  
Adverse physicochemical, human health and environmental effects  
May cause cancer (if inhaled).

#### 2.2 Labelling Elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) : Danger

Hazard statements (CLP) : H350i - May cause cancer by inhalation

Precautionary statements (CLP) : P201 - Obtain special instructions before use  
P280 - Wear eye protection, protective gloves, Respiratory

Extra phrases : Restricted to professional users

Listed in Annex VI : Index No 650-017-00-8

### 2.3 Other hazards

Other hazards which do not result in classification : May cause mild mechanical irritation to skin, eyes and upper respiratory system.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## 3. Composition/information on ingredients

### 3.1 Substances

Name	%	Product identifier	Hazard Classification according to Regulation (EC) No 1272/2008 [CLP]
Aluminosilicate refractory ceramic fibres substance listed as REACH Candidate (Note A)(Note R)	100	CAS No. 142844-00-6 Index No. 650-017-00-8 Registration No. 01-2119458050-50-0006	Carc. 1B, H350

Full text of H- and EUH-statements: see section 16

Note A : Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4.

Note R: The harmonised classification as a carcinogen applies except in the case of fibres with a Length Weighted Geometric Mean Diameter (LWGMD) minus two geometric standard errors greater than 6 µm, as measured in accordance with Test method A.22 in the Annex to Commission Regulation (EC) No 440/2008.

### 3.2 Mixtures

No applicable

## 4. First aid measures

### 4.1 Description of first aid measures

#### First-aid measures after inhalation

Move to fresh air. If you feel unwell, seek medical advice.

#### First-aid measures after skin contact

Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Get medical advice if skin irritation persists.

#### First-aid measures after eye contact

Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

#### First-aid measures after ingestion

Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects after skin contact : mechanical irritation.

Symptoms/effects after eye contact : mechanical irritation.

### 4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically

## 5. Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : The product is not flammable. Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2 Special hazards arising from the substance or mixture

No additional information available

### 5.3 Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## 6. Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Concerning personal protective equipment to use, see section 8.

Emergency procedures : Prohibit unauthorized persons.

#### 6.1.2. For emergency responders

Protective equipment : Ensure adequate ventilation. Concerning personal protective equipment to use, see section 8.

Emergency procedures : Manipulations are to be done only by qualified and authorised persons.

#### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

##### Methods for cleaning up

Mechanically recover the product. Minimise generation of dust. Dust can be vacuumed with a vacuum cleaner containing a HEPA (High Efficiency Particulate Air) filter.

##### Other information

Disposal must be done according to official regulations.

#### 6.4 Reference to other sections

See section 7. See Heading 8. See Heading 13.

## 7. Handling and storage

#### 7.1 Precautions for safe handling

##### Precautions for safe handling

Avoid contact with skin and eyes. Use personal protective equipment as required. Obtain special instructions before use. Do not eat, drink or smoke when using this product. Clean contaminated areas thoroughly. Ensure good ventilation of the work station.

##### Hygiene measures

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2 Conditions for safe storage, including any incompatibilities

##### Storage conditions

Product must only be kept in the original packaging. Store tightly closed in a dry and cool place.

##### Information about storage in one common storage facility

Keep away from food, drink and animal feeding stuffs.

#### 7.3 Specific end use

The main application is thermal insulation. See Heading 8. Exposure scenarios.

## 8. Exposure controls/personal protection

#### 8.1 Control parameters

### 8.1.1 National occupational exposure and biological limit values

Aluminosilicate refractory ceramic fibres (142844-00-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Refractory ceramic fibres
BOELV	0.3 fibers/ml
Remark	BOELV (binding occupational exposure limit values)
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
United Kingdom - Occupational Exposure Limits	
Local name	Refractory ceramic fibres and special purpose fibres
BOELV	0.3 fibers/ml respirable fraction
Remark	Carc (Capable of causing cancer and/or heritable genetic damage)
Recommended monitoring procedures	"Man-made mineral fibre - Airborne number concentration by phase-contrast light microscopy" and MDHS 14/3 "General methods for sampling and gravimetric analysis of respirable and inhalable dust".
The UK follow MDHS 59 specific for MMVF	WHO-EURO method: Determination of airborne fibre number concentrations; A recommended method, by phase-contrast optical microscope
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

Aluminosilicate refractory ceramic fibres (142844-00-6)	
DNEL/DMEL(additional information)	
Long term – Local, Inhalation	2,17 f/ml

#### Additional information

The DNEL cited in the long term exposure section above is based on the incidence of lung tumours (non-significant at all treatment levels) in a multi-dose rat study reported by Mast et al (Inhalation Toxicology, 1995, 7(4), 469-502) which demonstrates a NOAEL of 162 f/l and leads to the calculated endpoint-specific DNEL of 2.17 f/ml.

SCOEL have recommended an BOELV for RCF of 0.3 f/ml based on measured lung function in exposed workers.

Assuming 45 years exposure, the average cumulative exposures of 147.9 (all workers in the high exposure group) and 184.8 fmo/ml (workers 60+ years of age in the high exposure group) - equivalent to average fibre concentrations of 0.27 and 0.34 Um' respectively- were considered as no observed adverse effect levels for lung function and SCOEL therefore proposed an BOELV of 0.3 f/ml. This is considerably lower than the calculated DNEL value.

#### 8.1.5. Control banding

No additional information available

### 8.2 Exposure controls

#### 8.2.1. Appropriate engineering controls

No additional information available

#### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



Eye protection: Safety glasses with side shields. EN 166

Skin and body protection: Impervious clothing. Do not take working clothes home

Hand protection: Leather protective gloves

Respiratory protection: If dust are formed ,wear appropriate mask. (FFP3)

Thermal hazards: No additional information available

### 8.2.3. Environmental exposure controls

Other information:

Do not eat, drink or smoke during use; Do not take working clothes home; Separate working clothes from town clothes. Launder separately Uses and Risk Management Measures (RMM)

Intended use

Secondary use — Conversion into wet and dry mixtures and articles.

Process would include: Mixing forming operations, handling of RCF/ASW products, assembly of RCF/ASW containing products, machine and hand finishing of RCF/ASW products.

Reference ES 2\*

RMM - Hierarchy of Controls

- Where it is practical to do so, automatically feed RCF/ASW in to the process
- Where practical to do so, segregate dry and wet processing
- Enclose the process where practically possible.
- Where practical to do so, segregate machine areas and restrict access to operators involved in the process.
- Enclose Machines as far as practically possible.
- Install LEV where possible, when machine finishing, handling, compressing and hand cutting to remove dust at source - Employ experienced personnel — trained in the correct use of fibrous products
- PPE and RPE used for all dusty tasks
- Provide vacuum cleaner connection point to central system where practical or use a portable HEPA vacuum
- Regular clean up — using a wet scrubbing unit where practically possible and in general a HEPA vacuum should be used. - Dry brushing and use of compressed air should be prohibited
- Waste materials to be contained at source, labelled and stored separately for disposal or recycling.

Intended use

Tertiary use - maintenance and service life (Industrial or professional use)

Process: Small scale repairs involving removal and installation of RCF/ASW products. Use of the product in an enclosed system, where there is occasional control access or no access.

Reference ES 3\*

RMM - Hierarchy of Controls

- Use pre-cut, pre-sized pieces where practically possible.
- Allow access only to trained (authorised) operators

- Where practically possible, perform all hand cutting in a segregated area, on a down draft bench.
- Clean up work area regularly during the shift using a HEPA equipped vacuum cleaner.
- Prohibit use of dry brushing and compressed air cleaning.
- Bag and seal waste immediately at source.
- Use PPE and RPE appropriate to task.
- Employ good hygiene practices.

Intended use

Tertiary use- installation and removal (industrial or professional).

Large scale removal and installation of RCF/ASW from Industrial processes. Large scale removal and installation by professionals.

Reference ES 4\*

RMM - Hierarchy of Controls

- Where practically possible enclose or segregate the work area. - Allow only authorised personnel.
- Pre-wet insulation prior to removal where practically possible.
- Where practically possible use a water lance for removal or vacuum-truck. - Use down draft bench for hand cutting products.
- Cover pre-cut section during transport and storage to prevent secondary exposure.
- Where practically possible provide multiple vacuum hoses for convenient cleanup of spillage or use portable HEPA filtered vacuums.
- Bag waste materials immediately at source
- Prohibit use of dry brushing and or compressed air cleaning. - Experienced personnel only
- Use appropriate PPE and RPE appropriate to expected concentrations.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	Solid
Colour	White
Appearance	Fibres
Odour	Odourless
Odour threshold	Not available
Melting point	> 1650 °C Fibres
Freezing point	Not applicable
Boiling point	Not available
Flammability	Non flammable
Explosive properties	Not explosive
Oxidising properties	Non oxidizing
Explosive limits	Not applicable
Lower explosive limit (LEL)	Not applicable
Upper explosive limit (UEL)	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available

pH	Not available
pH solution	Not available
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Solubility	< 1 mg/l Water
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available
Vapour pressure at 50 °C Density	Not available
Density	Not available
Relative density	Not available
Relative vapour density at 20 °C	Not applicable
Particle size	Not available
Particle size distribution	Not available
Particle shape	Not available
Particle aspect ratio	Not available
Particle aggregation state	Not available
Particle agglomeration state	Not available
Particle specific surface area	Not available
Particle dustiness	Not available

## 9.2 Other information

### 9.2.1 Information with regard to physical hazard classes

No additional information available

### 9.2.2 Other safety characteristics

Length weighted geometric mean diameter of fibres contained in the product: 1.4 - 3 µm

## 10. Stability and reactivity

10.1 Reactivity	Stable under normal conditions of use.
10.2 Chemical stability	The product is inorganic, stable and inert.
10.3 Possibility of hazardous reactions	No dangerous reactions known.
10.4 Conditions to avoid	No additional information available.
10.5 Incompatible materials	None
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

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



Acute toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	May cause cancer by inhalation Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

Aluminosilicate refractory ceramic fibres (142844-00-6)	
Viscosity, kinematic	Not applicable

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

No additional information available

### 11.2.2. Other information

#### Basic toxicokinetic

Exposure is predominantly by inhalation or ingestion. Man made vitreous fibres of a similar size to RCF/ASW have not been shown to migrate from the lung and/or gut and do not become located in other parts of the body When compared to many naturally occurring minerals, RCF/ASW has a low ability to persist and accumulate in the body (half-life of long fibres (> 20 µm) in 3 week rat inhalation test is approx. 60 days).

#### Human toxicological data

In order to determine possible human health effects following RCF exposure, the University of Cincinnati has been conducting medical surveillance studies on RCF workers in the U.S. The Institute of Occupational Medicine (IOM) has conducted medical surveillance studies on RCF workers in European manufacturing facilities.

Pulmonary morbidity studies among production workers in Europe and USA have demonstrated an absence of interstitial fibrosis and no loss in lung function was observed in the longitudinal study with RCF exposure.

A statistically significant correlation between pleural plaques and cumulative RCF exposure was evidenced in the USA longitudinal study.

The USA mortality study did not show evidence of increased lung tumour development either in the lung parenchyma or in the pleura.

#### Irritant Properties

Negative results have been obtained in animal studies (EU method B 4) for skin irritation. Inhalation exposures using the nose only route produce simultaneous heavy exposures to the eyes, but no reports of excess eye irritation exist. Animals exposed by inhalation similarly show no evidence of respiratory tract irritation.

Human data confirm that only mechanical irritation, resulting in itching, occurs in humans, Screening at manufacturers' plants in the UK has failed to show any human cases of skin conditions related to fibre exposure.

## 12. Ecological information

### 12.1 Toxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified

### 12.2 Persistence and degradability

Aluminosilicate refractory ceramic fibres (142844-00-6)	
Persistence and degradability	Not applicable

### 12.3 Bioaccumulative potential

No additional information available

### 12.4 Mobility in soil

No additional information available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7 Other adverse effects

No additional information available

## 13. Disposal considerations

### 13.1 Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

European List of Waste (LoW) code : 16 03 03\* - inorganic wastes containing dangerous substances

HP Code : HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

## 14. Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments Not applicable

## 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
28.	Aluminosilicate refractory ceramic fibres

Aluminosilicate refractory ceramic fibres is on the REACH Candidate List.

Aluminosilicate refractory ceramic fibres is not on the REACH Annex XIV List.

LUYANGWOOL is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

LUYANGWOOL is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

LUYANGWOOL contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Other information, restriction and prohibition regulations: Take note of Directive 94/33/EC on the protection of young people at work. Take note of Directive 92/85/EC on the safety and health of pregnant workers at work.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

## 16. Other information

Indication of changes:

Section	Changed item	Change	Comments
	General revision		SDS EU format according to COMMISSION REGULATION (EU) 2020/878
8.1	Occupational Exposure Limit	Modified	

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PNEC	Predicted No-Effect Concentration
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

Full text of H - and EUH – statements:

Carc. 1B	Carcinogenicity (inhalation) Category 1B
H350i	May cause cancer by inhalation.

Data sources : European Chemicals Agency

DISCLAIMER

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, LUYANG ENERGY-SAVING MATERIALS COMPANY LIMITED does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.