Safety Data Sheet

E-SPHERES®

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product Name	E-SPHERES®
Synonyms	Cenospheres, hollow ceramic microspheres.
	E-SPHERES SL series
	E-SPHERES ES series
CAS No.	93924-19-7
EC-No.	300-212-6
EU REACH Registration Number	01-2119563688-21-0002

1.2 Identified uses of the substance or mixture and uses advised against

Identified use:	Light weight inert filler for industrial applications only

1.3 Details of the supplier of the safety data sheet

Company	Envirospheres Pty Ltd
	PO Box 497
	Lindfield NSW 2070 Australia
Telephone	+61 2 9416 5644
E-mail	info@envirospheres.com.au
Website	https://envirospheres.com.au/

1.4 Emergency telephone number

+61 2 9416 5644

9am to 5pm Australian Eastern Time

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to GHS: Not classified as hazardous.

2.2 Label elements

Labelling according to GHS

Pictogram	Not required.
Single word	No single word
Hazard statement	None
Precautionary statement(s)	Handle with care to avoid dust generation.

2.3 Other hazards

Exposure may aggravate pre-existing respiratory conditions.

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name: E-SPHERES®

Chemical name	CAS number	Weight % content	GHS ingredient classification
Amorphous alumino silicate	1327-36-2	65 - 85	Not classified
Mullite	1302-93-8	20 - 30	Not classified
Calcite	1317-65-3	0 - 5	Not classified
Quartz	14808-60-7	0 - 1	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372

Full text of H-phrases: see section 16.

Quartz is at or less than the analytical detection limit for XRD analysis (less than 1%). Any quartz that may be present, is fused into the ceramic matrix and it is not biologically available.

4 FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Move person to fresh air. If irritation or discomfort continues seek medical advice.
Skin contact	Remove contaminated clothing and wash with plenty of water. Seek medical advice if irritation develops or persists.
Eye contact	Rinse with water immediately. Remove contact lenses if present and easy to remove and continue to rinse. Seek medical attention if discomfort continues.
Ingestion	Rinse mouth thoroughly, and seek medical attention if discomfort continues.

4.2 Most important symptoms and effects both acute and delayed

Inhalation	Prolonged exposure may cause irritation
Skin contact	Prolonged exposure may cause skin irritation.
Eye contact	May cause eye irritation.
Ingestion	Symptomatic treatment and seek medical advice in case of prolonged discomfort.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention	Treat symptomatically.

5 FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Product is not combustible. Choose extinguishing media suitable for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Fire Hazard	Product is not flammable.

5.3 Advice for fire fighters

Protective equipment and action	No special requirements. Do not allow run off into drains and water ways.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Non-emergency personnel	Evacuate unnecessary personnel.
Emergency personnel	Avoid formation of air borne dust and ventilate the area. Follow precautions for safe handling described in this safety data sheet. Respiratory protection, gloves and safety glasses must be used in high dust conditions.
Emergency procedures	Minor spills: Clean up the area immediately using dry clean up procedures and avoid generation of dust. Major spills: Avoid generation of dust. Contain any spills with bunding and covering of drains to prevent migration and entry into sewers or streams. See section 6.3 for clean-up procedures.

6.2 Environmental precautions

Environmental precautions	Contain all runoffs using appropriate measures. Do not discharge into drains, surface waters or ground waters.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Avoid dust formation. Scoop up or remove with approved industrial vacuum cleaner, if appropriate wet down using a gentle water spray to help minimise dust formation. Wash spill site if necessary, retaining all contaminated washing water. Place in a closed container and dispose of in accordance with local and national regulations.

6.4 Reference to other sections

Reference to other sections	See section 8 for personal protection and section 13 for waste disposal.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Safe handling	Wear protective clothing and glasses. In high dust concentration areas approved and suitable respiratory protection must be used, or suitable extraction/ventilation must be provided. Minimise air borne dust formation and avoid breathing dust and prolonged contact with the product.
Occupational Hygiene	Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Storage specifications	Store in original bags or tightly closed containers in well ventilated area and keep dry. Do not store near food or drinking water.

7.3 Specific end use(s)

Specific end use	Refer to section 1.2.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Particulates (insoluble or poorly soluble) not otherwise specified, PNOS

USA ACGIH (8hr TWA)	3mg/m^3 Respirable dust, 10mg/m^3 Inhalable dust
USA OSHA PEL (8hr TWA)	5mg/m^3 Respirable dust, 15mg/m^3 Total dust

8.2 Exposure controls

Appropriate engineering controls	Provide access to blow down and wash area such as eye wash stations and showers Ensure adequate ventilation, especially in confined spaces.
Personal protective equipment	 Safety glasses, gloves, protective clothing, and dust mask.
Respiratory protection	Use a NIOSH approved respirator or dust mask.
Hand protection	Protective gloves are recommended.
Eye Protection	Wear dust resistant safety goggles.
Skin and body protection	Wear suitable protective clothing.
Other protection	Measures should be taken to minimise contact and work area must be well ventilated. Provide eye wash station.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Free flowing powder
Colour	White or Grey
Odour	No perceptible odour
pH	6 – 8 (in aqueous solution)
Melting point	1500°C – 1800 °C (approximately 2730°F – 3300 °F)
Boiling point	Not applicable
Flash point	Not applicable
Flammability	Non-flammable
Risk of explosion	Not explosive
Vapour pressure	Not applicable
Relative density	0.6-0.9 g/cm3
Bulk density	0.3-0.4 g/cm3
Solubility	Insoluble in water
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity	Not applicable
Oxidation	Not oxidising
Particle characteristics	Typical particle size distribution range 20-500 microns

9.2 Other Information

No other information available

10 STABILITY AND REACTIVITY

10.1 Reactivity	No specific reactivity hazard associated with this product.
10.2 Chemical stability	Product is stable under normal storage and handling.
10.3 Possibility of hazardous reactions	None known.
10.4 Conditions to avoid	No special requirement.
10.5 Incompatible materials	None known.
10.6 Hazardous decomposition materials	None under normal conditions.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicological effects	No LD 50 and LC 50 data is available for this product.

	Skin irritation may result from physical contact. May cause eye irritation if exposed to large amounts of dust. Inhalation of high concentrations may cause irritation of the respiratory system.
Chronic toxicological effects.	No data available but if dust exposures are kept below the exposure standard, no long term health or toxic effects such as pneumoconiosis or lung cancer are expected.

12 ECOLOGICAL INFORMATION

12.1 Toxicity	No specific adverse effects are known.
12.2 Persistence and degradability	No information available.
12.3 Bioaccumulative potential	No information available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT and vPvB assessment	Product does not contain any substances
12.6 Other adverse effects	Avoid release to the environment.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of waste and residue in accordance with local and national regulations.

14 TRANSPORT INFORMATION

14.1 UN Number	None allocated.
14.2 Proper Shipping Name	None allocated.
14.3 Transport Class and Subsidiary Risk	
Land transport (ADR/RID/DOT)	Not classified as hazardous for transport.
Sea transport (IMDG)	Not classified as hazardous for transport.
Air transport (IATA)	Not classified as hazardous for transport.
14.4 Packing Group	None allocated.

15 REGULATORY INFORMATION

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

US Federal and Canadian Regulations

Chemical name	CAS number	United States Toxic Substances Control Act Inventory	Canadian Domestic Substances List
Aluminium silicate	1327-36-2	Listed	Listed
Mullite	1302-93-8	Listed	Listed

Calcite	1317-65-3	Listed	Listed
Quartz	14808-60-7	Listed	Listed

This product is an article as defined by TSCA, EINECS, CDSL, MITI, KECI, AICS, PICCS and CICS regulations and is exempt from chemical inventory listing requirements.

15.2 Chemical safety assessment No information available.

16 OTHER INFORMATION

16.1 Other information

GHS Full Text Phrases:

STOT- SE 3	Specific target organ toxicity(single exposure) Category 3
STOT- RE 1	Specific target organ toxicity(repeat exposure) Category 1
Carc. 1A	Carcinogenicity Category 1A
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure.

E-SPHERES consist of amorphous and poorly crystalline alumino silicates. XRD analysis of crystalline silica (quartz) determines that the quartz content is below the detection limit of analysis (in bulk materials).

Any quartz that is potentially present is fused into the microspheres' ceramic/glass matrix and it is not biologically available. E-SPHERES show no evidence of liberated (free) crystalline silica (quartz).

Particle size analysis indicates that 99% of the particles are greater than 20 micron with less than 0.5% being in the respirable size range. On the basis of findings of increased lung cancer risk in silicotics in some industries (but not in others) IARC has classified quartz as carcinogenic. However, in line with evidence from other naturally occurring non-fibrous alumino silicates that also may contain low levels of quartz, if dust exposures are kept below the exposure standard, no long term health or toxic effects such as pneumoconiosis or lung cancer are expected.

E-SPHERES are inert and do not leach detectable levels of heavy metals.

16.2 Revision

Revision date: August 2024 - Reviewed and replaces safety data sheet issued on August 2022.

Issue date: 29 August 2024

Disclaimer:

The information given in this SDS is to the best of Envirospheres' knowledge and believed accurate and reliable as of the data indicated. However, no warranty or guarantee is made to its accuracy, reliability or completeness. The information provided is based on proper handling and anticipated uses and is not valid for the material used in combination with other materials or in any process. Each user must, prior to usage, review this SDS to determine the suitability of the information for their particular use.