Version: 1.2 / EN
Revision Date: 9/29/2023

SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product identifiers

Product Name	:	ACS Material Monodisperse Mesoporous Silica Nanosphere Stellate MSN
Brand	:	ACS Material LLC
CAS-No.	:	7631-86-9

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

Identified uses	:	Laboratory chemicals, Manufacturing of substances

1.3 Details of the supplier of the safety data sheet

Company	:	ACS MATERIAL LLC 959 E Walnut St., Suite 100 Pasadena, CA 91106 USA
Telephone	:	+1 (866)-227-0656
Fax	:	+1 (781)-518-0284

1.4 Emergency telephone number

Emergency Phone #:		+1 (866)-227-0656

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance name	:	ACS Material Monodisperse Mesoporous Silica Nanosphere
Synonyms	:	Silicon dioxide
Formula	:	SiO_2
CAS-No	:	7631-86-9
EC-No.	:	231-545-4

Hazardous ingredients

Components	Classification	Concentration
Monodisperse Mesoporous Silica Nanosphere	STOT RE 1; H372	<= 100 wt.%

For the full text of the phrases mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, qualified personnel should give artificial respiration. Seek immediate medical attention.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing agentsappropriate for surrounding fire.

5.2 Special hazards arising from the substance or mixture
Not applicable.

5.3 Advice for firefighters
Move container from fire area if it can be done without personal risk. Avoid inhalation of material or combustion by-products. Wear full protective clothing and NIOSH-approved self-contained breathing apparatus (SCBA).

5.4 Further information
No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use suitable protective equipment.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis

Silicon dioxide	7631-86-9	TWA	20Million particles per cubic foot	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
	Remarks	Based on impinger samples counted by light-field techniques. mppcf X 35.3 = million particles per cubic meter = particles per c.c		
		TWA	80mg/m3 / %SiO2	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
		TWA	6 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	6 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

1)	Appearance	Form: powder Colour: white
2)	Odour	No data available
3)	Odour Threshold	No data available
4)	pH	Not applicable
5)	Melting point/freezing point	No data available
6)	Initial boiling point and boiling range	No data available
7)	Flash point	No data available
8)	Evaporation rate	No data available
9)	Flammability (solid, gas)	No data available
10)	Upper/lower flammability or explosive limits	No data available
11)	Vapour pressure	No data available
12)	Vapour density	No data available
13)	Relative density	2.2 g/cm^3
14)	Water solubility	Insoluble
15)	Partition coefficient: n- octanol/water	No data available
16)	Auto-ignition temperature	No data available
17)	Decomposition temperature	No data available
18)	Viscosity	No data available
19)	Explosive properties	No data available
20)	Oxidizing properties	No data available

9.2 Other safety information
No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Not applicable.

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - silicon oxides Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral
rat - 3,160 mg/kg
Inhalation
No data available.
Dermal
No data available.
Other information on acute toxicity
No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/eye irritation
No data available.

Respiratory or skin sensitisation
No data available.

Germ cell mutagenicity
Rat
Unscheduled DNA synthesis

Carcinogenicity

Carcinogenicity - Rat - Inhalation
Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available.

Specific target organ toxicity - single exposure
No data available.

Specific target organ toxicity - repeated exposure
No data available.
The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration hazard
No data available

Additional Information
RTECS: VV7310000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects
Sinks in water.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: REGULATORY INFORMATION

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

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Silicon dioxide	CAS-No. 7631-86-9	Revision Date 1993-04-24

New Jersey Right To Know Components

Silicon dioxide	CAS-No. 7631-86-9	Revision Date 1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.
H372 Causes damage to organs through prolonged or repeated exposure.
STOT RE Specific target organ toxicity - repeated exposure.

HMIS Rating
Health hazard: 1
Chronic Health Hazard: *
Flammability: 0
Physical Hazard 0
NFPA Rating
Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 1

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