Version: 1.2 / EN Revision Date: 04/12/2017

SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product identifiers

| Product Name : | ACS Material Mesoporous Silica Molecular Sieve SBA-16 |
|----------------|---|
| 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 according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Synonyms | : | Silica, SiO ₂ , Mesoporous Silica, Molecular Sieve, type SBA-16. |
|----------|---|---|
| Formula | | : SiO ₂ |



| Molecular weight | : | 60.09 g/mol |
|------------------|---|-------------|
| CAS-No | : | 7631-86-9 |
| EC-No. | : | 231-545-4 |

Hazardous ingredients

| Components | Concentration | CAS No. |
|-------------------|---------------|-----------|
| SiO ₂ | >99.0% | 7631-86-9 |
| Na ₂ O | <0.1% | 1313-59-3 |

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

Hazardous impurities: None known.

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, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

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 water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture Silicon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.



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5.4 Further information No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

- 6.2 Environmental precautions Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. 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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. 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 | Basis |
|-----------------|-----------|-------|-------------------------|-----------------------------------|
| | | | Parameters | |
| Silicon Dioxide | 7631-86-9 | TWA | 6mg/m ³ | USA. NIOSH Recommended |
| | | | - | Exposure Limits |
| | | | | |
| | | TWA | 80 mg/m ³ /% | USA. Occupational Exposure Limits |
| | | | SiO ₂ | (OSHA) - Table Z-3 Mineral Dusts |
| | | | | |



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

Impervious clothing recommended. 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. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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: Solid Colour: white |
|-----|--|------------------------------|
| 2) | Odour | No data available |
| 3) | Odour Threshold | No data available |
| 4) | рН | No data available |
| 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 |
| | | |



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- 13) Relative density
- 14) Water solubility
- 15) Partition coefficient: n- octanol/water
- 16) Auto-ignition temperature
- 17) Decomposition temperature
- 18) Viscosity
- 19) Explosive properties
- 20) Oxidizing properties
- 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** No data available
- **10.4 Conditions to avoid** Avoid moisture. Slight reactive with moisture.
- **10.5 Incompatible materials** Strong oxidizing agents and acids
- **10.6 Hazardous decomposition products** 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

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitisation No data available 2,2 g/cm³ insoluble No data available 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: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Silicon dioxide).

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

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.

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available



SECTION 13: DISPOSAL CONSIDERATIONS

| 13.1 | waste treatment methods | | | | | |
|------|---|--------------------------|---------|--|--|--|
| | Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensec professional waste disposal service to dispose of this material. | | | | | |
| | Contaminated packaging Dispose of as unused product. | | | | | |
| SECT | ION 14: TRANSPORT INFORMA | TION | | | | |
| 14.1 | UN number ADR/RID: - IM | DG: - | IATA: - | | | |
| 14.2 | UN proper shipping nameADR/RID: Not dangerous goodsIMDG:Not dangerous goodsIATA:Not dangerous goods | | | | | |
| 14.3 | Transport hazard class(es) ADR/RID: - | IMDG: - | | | | |
| 14.4 | Packaging group ADR/RID: - | IMDG: - | | | | |
| 14.5 | Environmental hazards ADR/RID: no | IMDG Marine pollutant: r | 0 | | | |
| 14.6 | Special precautions for user No data available | | | | | |

SECTION 15: REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

No data available

15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

Disclaimer: ACS Material, LLC believes that the information in this Safety Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.

