

MAYATERIALS, INC.  
MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Information

Product Name: OCTA(TETRAMETHYLAMMONIUM)SILSESQUIOXANE

Synthesized by: Mayaterials Inc.

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Section 2 - Composition/ Ingredient

Chemical Name: OCTA(TETRAMETHYLAMMONIUM)SILSESQUIOXANE

CAS No. 69667-29-4

SARA 313: No

Formula:  $C_{32}H_{96}N_8O_{20}Si_8 \cdot nH_2O$  ( $n \approx 20-60$ )

Section 3 - Hazards Identification

HMIS RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 1

For additional information on toxicity refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

## EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

## Section 5 - Fire Fighting Measures

FLASH POINT: N/A

AUTOIGNITION TEMP: N/A

FLAMMABILITY: N/A

EXTINGUISHING MEDIA

Suitable: Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

## Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Store under nitrogen. Store in a cool dry place.

SPECIAL REQUIREMENTS

Susceptible to CO<sub>2</sub> pick up. Store under nitrogen. Store in a cool dry place.

## Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

Hand: Protective gloves.

Eye: Chemical safety goggles.

## GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

Appearance Physical State: Solid

### PROPERTIES

Molecular Weight 1137.8 g/mol

pH N/A

BP/BP Range N/A

MP/MP Range 135 - 143 °C

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density N/A

Bulk Density N/A

Odor Threshold N/A

Volatile% < 1 wt %

VOC Content < 1 wt %

Water Content (within the hydrated crystals) 30~45 wt %

Solvent Content < 1wt %

Evaporation Rate N/A

Viscosity N/A

Surface Tension N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point N/A

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A

Refractive Index N/A

Optical Rotation N/A

Miscellaneous Data N/A

Solubility: Soluble in MeOH, EtOH, water.

Note: N/A = not available

#### Section 10 - Stability and Reactivity

##### STABILITY

Stable: Stable.

Conditions to avoid: Moisture.

Materials to Avoid: Strong oxidizing agents and strong bases.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Silicon oxide.

##### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

#### Section 11 - Toxicological Information

##### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract.  
May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

##### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### Section 12 - Ecological Information

No data available.

#### Section 13 - Disposal Considerations

##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material.

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

#### Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: This substance is considered to be non-hazardous for air transport.

#### Section 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

#### Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does no warranty or representation is made as to the correctness or sufficiency of the information and the information is intended only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Mayaterials, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.