

Section 1: IDENTIFICATION

Product Name: Mullite

Article Number: 1020, 9441, FM 300µm, SM 200µm, SM 300µm

Product Use: Thermal spray powder.

Restrictions on Use: Not available.

Manufacturer/Supplier: Saint-Gobain Coating Solutions
One New Bond Street
Worcester, MA 01615-0137, United States

Email: CeramicMaterials@saint-gobain.com

Phone Number: (508) 795-5000

Emergency Phone: (800)255-3924 (North America)
+1 (813)248-0585 (International)
Australia: 1-300-954-583
Brazil: 0-800-591-6042
China: 400-120-0751
India: 000-800-100-4086
Mexico: 01-800-099-0731

Date of Preparation of SDS: April 1, 2022

Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification: Not hazardous according to OSHA criteria (29 CFR 1910.1200).
Not hazardous according to WHMIS 2015 criteria.

LABEL ELEMENTS

Hazard None.

Pictogram(s):

Signal Word: None.

Hazard Not applicable.

Statements:

Precautionary Statements

Prevention: Not applicable.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 100% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is not considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is not considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient(s) | Common name / Synonyms | CAS No. | % wt./wt. |
|--|---------------------------|-----------|-----------|
| Kyanite (Al ₂ O(SiO ₄)) | Not available. | 1302-76-7 | 95 - 99 |
| Aluminum oxide (Al ₂ O ₃) | Not available. | 1344-28-1 | 0 - 5 |

Section 4: FIRST-AID MEASURES

- Inhalation:** If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
- Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
- Skin Contact:** If on skin: Wash with plenty of water. Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
- Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION
Not flammable or combustible by OSHA/WHMIS criteria.

- Sensitivity to Mechanical Impact:** This material is not sensitive to mechanical impact.
- Sensitivity to Static Discharge:** This material is not sensitive to static discharge.

MEANS OF EXTINCTION

- Suitable Extinguishing Media:** Use appropriate extinguishing media for surrounding fire. Move containers from fire area if you can do it without risk.
- Unsuitable Extinguishing Media:** Not available.
- Products of Combustion:** Oxides of aluminum. Oxides of silica.
- Protection of Firefighters:** Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

- Emergency Procedures:** Keep unauthorized personnel away.
- Personal Precautions:** Use personal protection recommended in Section 8.
- Environmental Precautions:** Keep out of drains, sewers, ditches, and waterways.
- Methods for Containment:** Do not flush to sewer or allow to enter waterways.
- Methods for Clean-Up:** Sweep up and shovel into suitable containers for disposal.
- Other Information:** See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

- Handling:**
Do not swallow. Wash hands thoroughly after handling. See Section 8 for information on Personal Protective Equipment.
- Storage:**
Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines
Component

- Kyanite [CAS No. 1302-76-7]
ACGIH: 1 mg/m³ (TWA); A4; Respirable particulate matter (2007); For Aluminum metal and Insoluble compounds
OSHA: 15 mg/m³ (Total dust) (TWA), 5 mg/m³ (Respirable fraction) (TWA); For Particulates Not Otherwise Regulated (PNOR).
- Aluminum oxide [CAS No. 1344-28-1]
ACGIH: 1 mg/m³ (TWA); A4; Respirable particulate matter (2007); For Aluminum metal and Insoluble compounds
OSHA: 15 mg/m³ (Total dust) (TWA), 5 mg/m³ (Respirable fraction) (TWA); For Particulates Not Otherwise Regulated (PNOR).

PEL: Permissible Exposure Limit
TLV: Threshold Limit Value

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TWA: Time-Weighted Average
STEL: Short-Term Exposure Limit
C: Ceiling

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection: Wear safety glasses. Indirect vented, dust-tight goggles are required if dust is generated when handling this product. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3:20 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection: Wear protective gloves. Consult manufacturer specifications for further information.

Skin and Body Protection: Wear protective clothing.

Respiratory Protection: If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-18, with particulate filter, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Whitish to grey powder.
Colour: Whitish to grey.
Odour: Odourless.
Odour Threshold: Not available.
Physical State: Solid.
pH: Not available.
Melting Point / Freezing Not available.



Point:

| | |
|--|---------------------|
| Initial Boiling Point: | Not available. |
| Boiling Range: | Not available. |
| Flash Point: | Not available. |
| Evaporation Rate: | Not available. |
| Flammability (solid, gas): | See Section 5. |
| Lower Flammability Limit: | Not available. |
| Upper Flammability Limit: | Not available. |
| Vapor Pressure: | Not available. |
| Vapor Density: | Not available. |
| Relative Density: | Not available. |
| Solubilities: | Insoluble in water. |
| Partition Coefficient: n-Octanol/Water: | Not available. |
| Auto-ignition Temperature: | Not available. |
| Decomposition Temperature: | Not available. |
| Viscosity: | Not available. |
| Percent Volatile, wt. %: | Not available. |
| VOC content, wt. %: | Not available. |
| Density: | Not available. |
| Coefficient of Water/Oil Distribution: | Not available. |

Section 10: STABILITY AND REACTIVITY

| | |
|--|--|
| Reactivity: | Contact with incompatible materials. Exposure to heat. |
| Chemical Stability: | Stable under normal storage conditions. |
| Possibility of Hazardous Reactions: | None known. |
| Conditions to Avoid: | Contact with incompatible materials. Exposure to heat. |
| Incompatible Materials: | Strong oxidizers. |
| Hazardous Decomposition Products: | Not available. |

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral: Not available.

Dermal: Not available.

Inhalation: Not available.

Component Toxicity

| Component | CAS No. | LD ₅₀ oral | LD ₅₀ dermal | LC ₅₀ |
|----------------|-----------|-----------------------|-------------------------|------------------|
| Kyanite | 1302-76-7 | Not available. | Not available. | Not available. |
| Aluminum oxide | 1344-28-1 | Not available. | Not available. | Not available. |

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components.

Component Carcinogenicity

| Component | ACGIH | IARC | NTP | OSHA | Prop 65 |
|----------------|-------|-------------|-------------|-------------|-------------|
| Kyanite | A4 | Not listed. | Not listed. | Not listed. | Not listed. |
| Aluminum oxide | A4 | Not listed. | Not listed. | Not listed. | Not listed. |

Mutagenicity: Not available.

Reproductive Effects: Not available.

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Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Placard(s): Not applicable.

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Placard(s): Not applicable.

Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.



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Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III

| Component | Section 302 (EHS) TPQ (lbs.) | Section 304 EHS RQ (lbs.) | CERCLA RQ (lbs.) | Section 313 | RCRA CODE | CAA 112(r) TQ (lbs.) |
|----------------|------------------------------|---------------------------|------------------|-------------|-------------|----------------------|
| Aluminum oxide | Not listed. | Not listed. | Not listed. | 313 | Not listed. | Not listed. |

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

| Component | CAS No. | RTK List |
|----------------|-----------|----------|
| Aluminum oxide | 1344-28-1 | Listed. |

Note: E = Extraordinarily Hazardous Substance

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

| Component | CAS No. | RTK List |
|----------------|-----------|----------|
| Aluminum oxide | 1344-28-1 | Listed. |

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

| Component | CAS No. | RTK List |
|----------------|-----------|----------|
| Aluminum oxide | 1344-28-1 | E |

Note: E = Environmental Hazard

California

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



SAFETY DATA SHEET according to the US OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Hazardous Products Regulations

Mullite

Date of Preparation: April 1, 2022

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: April 1, 2022

Version: 1.0

GHS SDS Prepared by: Aegis Regulatory Inc.

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