

## **SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

### Section 1: Identification

#### **1.1) Product identifier:**

Product Name : alpha – Aluminum Oxide Powder  
Synonyms :  $\alpha$ - Aluminum Oxide, Alumina, Aluminum(III) Oxide  
Product Number : PO0406, PO0403, PO0424, PO0412, PO0423, PO0427, PO0409,  
PO0402, PO0416, PO0405, PO0417  
CAS Number : 1344-28-1

#### **1.2) Company information:**

Address: MSE Supplies, LLC  
4400 E Broadway Blvd, Suite 600  
Tucson, AZ 85711, USA  
Telephone: +1 520-789-6673  
Email: [info@mse-supplies.com](mailto:info@mse-supplies.com)  
Emergency Telephone : +1-703-527-3887

#### **1.3) Relevant identified uses of the substance or mixture and uses advised against:**

Identifies uses: Laboratory chemicals, Synthesis of substances

### Section 2: Hazard(s) Identification

#### **2.1) Classification of the substance or mixture GHS classification in accordance with 29 CFR 1910 (OSHA HCS):**

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 covered by GHS:**

None.

### Section 3: Composition/Information on Ingredients

#### **3.1) Substances:**

**SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

Formula:  $\text{Al}_2\text{O}_3$   
 Molecular Weight: 101.96 g/mol  
 CAS Number: 1344-28-1  
 EC Number: 215-691-6

Component	Classification	Concentration
Aluminum Oxide		<=100%

Section 4: First-Aid Measures

**4.1) Description of first aid measures:**

**General advice**

Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**

Wash off with soap and plenty of water.

**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.

**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: Fire-Fighting Measures

**5.1) Suitable extinguishing media:**

## **SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **5.2) Special hazards arising from the substance or mixture:**

Aluminum oxide. Not combustible.

### **5.3) Advise for firefighters:**

In the event of fire, wear self-contained breathing apparatus.

### **5.4) Further information:**

Do not use halocarbon extinguishers.

## Section 6: Accidental Release Measures

### **6.1) Personal precautions, protective equipment, and emergency procedures:**

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **6.2) Environmental precautions:**

No special precautionary measures necessary.

### **6.3) Methods and materials for containment and cleaning up:**

Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4) Reference to other sections:**

For disposal see section 13.

## Section 7: Handling and Storage

### **7.1) Precautions for safe handling:**

## SAFETY DATA SHEET: alpha – Aluminum Oxide Powder

Version: 2.1

Revision Date: 06/19/2020

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.

Keep in a dry place.

Storage class (TRGS 510): 13: Non Combustible Solids

### 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

Component	CAS-Number	Value	Control Parameters	Basis
Aluminum Oxide	1344-28-1	TWA	15 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	1 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	10 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		PEL	5 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

**SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

		TWA	1 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		

**8.2) Exposure controls:**

**Appropriate engineering controls:**

Change contaminated clothing. Wash hands after working with substance.

**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). Safety glasses

**Respiratory protection:**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure:**

No special precautionary measures necessary.

Section 9: Physical and Chemical Properties

**9.2) Information on basic physical and chemical properties:**

a) Appearance (physical state, color, etc.)	White powder
b) Upper/lower flammability or explosive limits	No data available
c) Odor	No data available
d) Odor threshold	No data available
e) Vapor pressure	No data available

**SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

f) Vapor density	No data available
g) pH	No data available
h) Density	3.99 g/cm <sup>3</sup>
i) Melting point/freezing point	2,040 °C (3,704 °F)
j) Solubility(ies)	Insoluble in water
k) Initial boiling point and boiling range	2,980 °C 5,396 °F
l) Flash point	No data available
m) Evaporation rate	No data available
n) Flammability (solid, gas)	No data available
o) Partition coefficient: n-octanol/water	No data available
q) Auto-ignition temperature	No data available
r) Decomposition temperature	No data available
s) Viscosity	No data available
t) Explosive properties	No data available
u) 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:**

The product is chemically stable under standard ambient conditions (room temperature)

**10.3) Possibility of hazardous reactions:**

No data available

## **SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

### **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. - Aluminum oxide  
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 - male and female - > 10,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 2.3 mg/l

(OECD Test Guideline 403)

Dermal: No data available

No data available

#### **Skin corrosion/irritation:**

Skin - Rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

#### **Serious eye damage/ eye irritation:**

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

#### **Respiratory or skin sensitization:**

Draize Test - Guinea pig

Result: Does not cause skin sensitization.

- Mouse

Result: Does not cause respiratory sensitization.

## **SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

### **Germ cell mutagenicity:**

Ames test  
Bacillus subtilis  
Result: negative  
(IUCLID)

### **Carcinogenicity:**

**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 on OSHA's list of regulated carcinogens.

### **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: BD1200000

Cough, chest pain, Difficulty in breathing, Gastrointestinal disturbance. 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



**SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

**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:**

No data available

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

**SAFETY DATA SHEET: alpha – Aluminum Oxide Powder**

**Version: 2.1**

**Revision Date: 06/19/2020**

Section 15: Regulatory Information

**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:**

No SARA Hazards

**Massachusetts Right To Know Components:**

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

Section 16: Other Information

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used 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. MSE Supplies LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

**Version: 2.1**

**Revision Date: 06/19/2020**