

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: July 10, 2017

SPI #'s 01340-AB, 01341-AB, 01342-AB

SPI Supplies® Brand Alumina Polishing Slurry

Section 1.1: Identification

Chemical Name/Synonyms Alumina Slurry; Aluminum Oxide Mineral (non-fibrous)

Product or Trade Name SPI Supplies® Brand Alumina Polishing Slurry

CAS #'s 1344-28-1

Section 1.2: Relevant Uses/Restrictions

Abrasive product.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2 Label elements

Pictogram: Not applicable

Signal Word: Not applicable

Hazard statements: Not applicable

Precautionary statements: Not applicable

Unknown percentage statements (if needed): None

2.3 Other Hazards: None

Hazardous Material Information System USA

Health 0
Fire Hazard 0
Reactivity 0
Personal Protection X – See Section 8.2.2 – Personal protective equipment

NFPA Rating (estimated)

Health 0
Flammability..... 1
Reactivity 0

Section 3: Composition

3.1 Substances:

Ingredient	CAS No.	% by Weight
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	>99

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation: Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact: Wash with soap and water. If signs/ symptoms develop, get medical attention.

Eye Contact: Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/ symptoms persist, get medical attention.

Ingestion: If swallowed, no need for first aid is anticipated.

Self-protection of the first aider: No further information available.

4.2 Most important symptoms and effects, both acute and delayed:

See Section 11.1 for information on toxicological effects.

4.3 Indication of any immediate medical attention and special treatment needed:

Not applicable.

Section 5: Fire Fighting Measures

5.1 **Extinguishing media:** In case of fire: Use a fire fighting agent suitable for ordinary combustible material, such as water or foam to extinguish.

5.2 **Special hazards arising from the substance or mixture:** None inherent in this product.

5.3 **Advice for firefighters:**

Special protective equipment and precautions for firefighters: No special protective actions for fire-fighters are anticipated.

Section 6: Accidental Release Measures

6.1 Personal precautions:

Ventilate the area with fresh air. Observe precautions from other sections.

6.2 Environmental precautions: Avoid release to the environment.

6.3 Methods and material for containment and cleaning up:

Use wet sweeping compound or water to avoid dusting.

Sweep up.

Place in a closed container approved for transportation by appropriate authorities.

Clean up residue.

Seal the container.

Dispose of collected material as soon as possible.

6.4 Reference to other sections:

See Section 13 for Disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid breathing of dust created by sanding, grinding or machining.

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

No special storage requirements.

7.3 Specific end uses

Abrasive product.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits:

<u>Ingredient</u>	<u>CAS No.</u>	<u>Agency</u>	<u>Limit type</u>
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	CMRG	TWA: 1 fiber/cc
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	OSHA	TWA (as total dust): 15 mg/m ³ TWA (respirable fraction): 5 mg/m ³

Aluminum, insoluble compounds 1344-28-1 ACGIH TWA (respirable fraction): 1 mg/m³
A4: Not classified as human carcinogen

Biological limit values: No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Provide appropriate local exhaust ventilation for sanding, grinding or machining.

8.2.2 Individual protection measures (PPE)

Eye/face protection: To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended: Safety Glasses with side shields.

Skin/hand protection: Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Respiratory protection: Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half face-piece or full face-piece air-purifying respiratory suitable for particulates.

For questions about suitability for a specific application, consult with your respirator manufacturer.

8.2.3 Environmental exposure controls: Avoid release to the environment.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Solid white powder

Odor: Odorless

Odor threshold: No data available

pH: Not applicable

Melting point/Freezing point: 2,050 °C

Boiling point/Boiling point range: 2,977 °C

Flash Point: No flash point

Evaporation rate: Not applicable

Flammability (solid, gas): Not classified

Upper/lower flammability or explosive limits: Not applicable

Vapor Pressure: 1 mm Hg [@ 2,158 °C]

Vapor density: No data available

Density: 3.98 g/ml

Solubility in water: Nil

Partition coefficient (n-octanol/water): No data available

auto-ignition temperature: Not applicable

Decomposition temperature: No data available

Viscosity: Not applicable

9.2 Other information: No further relevant information available.

Section 10: Stability and Reactivity

10.1 Reactivity: This material is considered to be non-reactive under normal use conditions.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4 Conditions to avoid: None known.

10.5 Incompatible materials: None known.

10.6 Hazardous decomposition products: None known.

Section 11: Toxicological Information

Information on the likely routes of exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact

Mechanical Skin Irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact

Mechanical Eye Irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/ symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

No known health effects.

Additional Information:

This document covers only the product as sold. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

11.1 Information on toxicological effects

a. acute toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available, calculated ATE>5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Dermal		LD50 estimated to be >5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Inhalation	Rat	LC50>2.3mg/l (Dust/Mist -4 hours)
Aluminum Oxide Mineral (non-fibrous)	Ingestion	Rat	LD50>5,000 mg/kg

ATE = acute toxicity estimate

b. skin corrosion/irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation

c. serious eye damage/irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation

d. respiratory or skin sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

e. germ cell mutagenicity

Name	Route	Value
Aluminum Oxide Mineral (non-fibrous)	In Vitro	Not mutagenic

f. carcinogenicity

Name	Route	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Inhalation	Rat	Not carcinogenic

g. reproductive toxicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

h. STOT-single exposure

For the component/components, either no data are currently available or the data are not sufficient for classification.

i. STOT-repeated exposure

Name: Aluminum Oxide Mineral (non-fibrous)
Route: Inhalation
Target Organ(s): Pneumoconiosis, pulmonary fibrosis
Value: Some positive data exist, but the data are not sufficient for classification
Species: Human
Test Result: NOAEL, Not available
Exposure Duration: Occupational exposure

j. aspiration hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Section 12: Ecological Information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio-accumulative 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 further data available.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated.

Section 14: Transport Information

DOT: Not regulated as a dangerous goods.

IATA: Not regulated as a dangerous goods.

IMDG: Not regulated as a dangerous goods.

Section 15: Regulatory Information

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

United States:

TSCA:

All ingredients of this product are on the TSCA Inventory.

Health & Safety Reporting List

None of the ingredients of this product is on the Health & Safety Reporting List.

Chemical Test Rules

None of the ingredients of this product is under a Chemical Test Rule.

Section 12b:

None of the ingredients of this product is listed under TSCA Section 12b.

TSCA Significant New Use Rule:

None of the ingredients of this product has a TSCA SNUR.

CERCLA Section 103:

None of the ingredients of this product is listed under CERCLA Section 103.

SARA:**Section 302 (RQ)**

None of the ingredients of this product has an RQ.

Section 302 (TPQ)

None of the ingredients of this product has a TPQ.

Section 313**SARA 313 Components**

Aluminium oxide	CAS-No.1344-28-1	Revision Date 2007-03-01
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SARA 311/312 Hazards

Chronic Health Hazard

Massachusetts Right To Know Components

Aluminium oxide	CAS-No. 1344-28-1	Revision Date 2007-03-01
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Pennsylvania Right To Know Components

Aluminium oxide	CAS-No. 1344-28-1	Revision Date 2007-03-01
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New Jersey Right To Know Components

Aluminium oxide	CAS-No. 1344-28-1	Revision Date 2007-03-01
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California No Significant Risk Level:**California Prop. 65:**

None of the ingredients in this product is listed under California Prop. 65.

European/International Regulations:

European Labeling in Accordance with EC Directives

None of the ingredients of this product is listed.

WGK (Water Danger/Protection):

None of the ingredients of this product is listed.

Canada

This product has a WHMIS classification of: Not listed.

DSL/NDSL:

CAS# 1344-28-1 is listed on the DSL List.

15.2 Chemical Safety Assessment: Not available.

Date of Preparation: July 10, 2017

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulative and Toxicological
vPvB: very Persistent and very Bio-accumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit
CEIL: Ceiling
LOLI: The Registered Chemicals List of Lists

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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