PRECISION SURFACES INTERNATIONAL, INC.
922 Ashland Houston, TX 77008-6734
713-426-2220 Fax: 713-426-2223

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name:	Hi Purity Alumina Powder
Product Identifier:	PSI-5601-1 or 5 PSI-5603-1 or 5 or 20 PSI-5605-1 or 5
Supplier:	Precision Surfaces International, Inc. 922 Ashland, Houston, TX 77008-6734
Emergency Telephone:	Infotrac 800-535-5053
Recommended Use:	

SECTION 2: Hazard(s) Identification

GHS Classification
Non-Hazardous

IDLH (Immediate Danger to Life and Health)
None

Physical Hazards
Not Classified

Health Hazards: Classification of the Substance of Mixture (Dry Dust / Inhalation)
Eye Irritation – Category 2B

Label Elements

Signal Word
None

Pictograms

Acute Health Hazards

Hazard Statement(s)
H320: Causes Eye Irritation – Category 2B
H332: May be harmful if inhaled.

Precautionary Statements
P261: Avoid breathing dust, fume, gas, mist, vapors, and/or spray.

Precautionary Response

P305+P351+P338: **IF IN EYES**: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists, get medical advice / attention.
P304+P340+P312: **IF INHALED**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell.

SECTION 3: Composition/Information on Ingredients

The terms "hazardous" and "hazardous materials" as used within this SDS (EU - MSD) should be interpreted as defined by, and accordance with, the OSHA Hazard Communication Standard (29 CFR 1910:1200) and the EU Occupational Exposure Limits (OEL) REGULATION (EC) No 1272/2008 including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference and stated below as appropriate.

OECD SIDS documents published by UNEP Chemicals in response to its mandate to facilitate the access to information needed for health and environmental risk assessment of chemicals. The documents contain the information gathered and an Initial Assessment performed under the framework of the OECD HPV Chemicals Program.

Ingredient	C.A.S. No.	EC Number	% by Weight
Aluminum Oxide	1344-28-1	N/A	99 – 100
Proprietary Non-Hazardous Ingredients	N/A	N/A	0 – 1

Hazardous Mixtures
None (See Section 8.0 for Occupational Exposure Limits)

SECTION 4: First-aid Measures

First Aid Measures General
If medical advice is needed, have product container or label at hand.

Inhalation
If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact
Rinse immediately with plenty of water. Gently wash with plenty of soap and water. Obtain medical attention if irritation persists.

Eye Contact
Immediately rinse with water for a prolonged period while holding the eyelids wide open. Seek medical attention if material is embedded in eye. If eye irritation persists: Get medical advice and attention.

Ingestion
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Drink large quantities of water with Milk of Magnesia or other medical antacid. Never give anything by mouth to an unconscious person.

Symptoms/Injuries
Repeated or prolonged inhalation may damage lungs.

Inhalation

May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Skin Contact
Prolonged contact with large amounts of dust may cause mechanical irritation. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Eye Contact
Redness, pain.

Ingestion
Abdominal pain.

Chronic Symptoms
Respiratory difficulties.

SECTION 5: Fire-fighting Measures

Fire Hazard
Will not burn.

Suitable extinguishing media
Use ABC type fire extinguisher for surrounding fire.

Special Firefighting Procedures
None

Unusual Fire and Explosion Hazards
None

Reactivity
None

Protective Equipment for Firefighting
Self-Contained Breathing Apparatus and clothing for chemical fires.

Protection during Firefighting
Use normal individual fire protective equipment.

SECTION 6: Accidental Release Measures

Protective equipment and emergency procedures
Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Keep upwind. Keep out of low lying areas. Ventilate closed spaces before entering.

Environmental Precautions
Prevent further leakage or spillage and comply with local, state and federal regulations.

Methods and materials for containment and clean up

If product is dry, avoid generation of dust during clean-up of spills. Recover the dried product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Liquid product can be wiped or mopped up and disposed of accordingly.

SECTION 7: Handling and Storage

Precautions for safe handling
Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Wear suitable protective clothing, gloves and eye/face protection. If airborne dust is generated, use the appropriate NIOSH approved respiratory protection.

Conditions for safe storage including any incompatibilities
Strongly hygroscopic, keep in a dry place. Store in original tightly closed container. Keep away from food, drink and animal feeding stuffs. Use care in handling/storage. Store in accordance with local, regional, national, and international regulation. Keep out of reach of children. Always use oldest stock first.

SECTION 8: Exposure Controls/Personal Protection

Control Parameters
Use in accordance with safest practices. General Requirements for respirable fraction:

ACGIH TWA (mg/m³)	15 mg/m3
ACGIH STEL	15 mg/m3
ACGIH TLV	15 mg/m3
NIOSH REL (TWA) (mg/m3)	5 mg/m3
OSHA PEL (TWA) (mg/m3) (Air Contaminates)	15 mg/m3
IDLH (mg/m³)	Not Hazardous
OECD SIDS UNEP TLV	Not Available
BAuATRGS 900	Not Available

TLV: Threshold Limit Value of a chemical substance is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse health effects.
TWA: (Time Weighted Average - TLV-TWA): average exposure on the basis of an 8h/day, 40h/week work schedule.
STEL: (Short Term Exposure Level) is an employee's 15-minute time weighted average exposure at any time during a work day and cannot be repeated more than 4 times in a day.
Personal Protective Equipment: Use chemical goggles or safety glasses and chemical resistant gloves while handling under normal conditions.

Respiratory Protection
Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All requirements set forth in 29CFR1910.134 must be met.

Protective Gloves
Nitrile gloves are recommended. Frequent change is advisable.

Ventilation
Provide adequate general and local exhaust ventilation.

Eye protection
Chemical / splash goggles are recommended. Eye wash station must be present.

Other Equipment
None

SECTION 9: Physical and Chemical Properties

Appearance and Odor:	Odorless
Color:	White to Tan
Physical State:	Solid
pH:	9.4 – 10.1 at 20°C
Melting Point:	2040°C
Boiling Point:	2980°C
Flash Point:	Not Applicable
Freezing Point:	Not Available
Evaporation Rate (baC=1):	Not Available
Vapor Pressure:	1 hPa (1mmHGg) at 2158°C
Vapor Density:	Not Available
Specific Gravity:	Not Available
Solubility in Water:	Not Soluble
Solubility in Oil:	Not Available
Solubility in Solvents:	Not Available
Percent volatility::	Not Applicable
Viscosity:	Not Available

SECTION 10: Stability and Reactivity

Reactivity
Hazardous reaction will not occur under normal conditions.

Chemical Stability
This composition is stable under normal conditions.

Conditions to avoid
Exposure to Moisture.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Incompatibility
Strong Acids, Strong Bases, Oxygen, Nitrates, Halogens.

Hazardous Decomposition Products
No Data Available.

SECTION 11: Toxicological Information

Acute Toxicity

Name	Route	Species	Value
Aluminum Oxide	Oral	Rat	LD50 > 10,00 mg/kg

Acute Toxicity

May cause irritation or burns to eyes, skin, and respiratory system.

Skin Corrosion/Irritant
Irritating to skin.

Serious Eye Damage/Irritant
Minimal risk of damage to eyes.

Respiratory/Skin Sensitization
Not Classified

Germ Cell Mutagenicity
Not Classified

Carcinogenicity
Not Classified

Reproductive Toxicity
Not Classified

Target Organ Toxicity (Single Exposure)
No data available.

Target Organ Toxicity (Repeated Exposure)
No data available.

Aspiration Hazard
Not Classified

Teratogenicity
Not Classified

SECTION 12: Ecological Information

Ecotoxicity
This product is not expected to be toxic to the environment. Adopt environmental controls to prevent the product from being released into the environment.

Persistence and Degradability
Not readily biodegradable.

Bioaccumulative Potential
Not expected to bioaccumulate.

Mobility in Soil
No information available.

Other Adverse Effects
No information available.

SECTION 13: Disposal Considerations

You may moisten product to be swept. Dispose in a safe manner in accordance with local, state and federal regulations.

SECTION 14: Transport Information

Not regulated per U.S DOT, IATA, or IMO.

SECTION 15: Regulatory Information

US Federal Regulations

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA)
None listed under CERCLA.

Toxic Substance Control Act (TSCA)
All of the components of this material are listed on the TSCA Chemical Substances Inventory.

Clean Water Act (CWA)
None listed under sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

Clean Air Act (CAA)
None listed under the Clean Air Act.

Superfund Amendments and Reauthorization Act (SARA) Title III Information
This product contains chemicals subject to annual release reporting requirements Under SARA Title III, Section 313 (40 CFR 372). SARA 311 / 312 Hazards: Acute Health Hazard, Chronic Health Hazard.

European/International Regulations

Control of Substances Hazardous to Health (COSHH)
Component(s) are listed under various sections of the COSHH regulation. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Scottish Environmental Protection Agency (SEPA)
Component(s) are listed under various sections of SEPA. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Canada
Contact your local authorities to determine if substances are regulated under their jurisdiction.

Hazard Classification

European Union Directives 67/548/EEC and 1999/45/EC
Safety Phrases
S 36 Wear suitable protective clothing.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 38 In case of insufficient ventilation wear suitable respiratory equipment.

U.S. State Regulatory Information

The components of these products are covered under specific State regulations, as denoted below:

California Proposition 65
This product does not contain chemicals regulated under California Proposition 65.

U.S. - New Jersey – Right to Know Hazardous Substance List
Aluminum Oxide 1344-28-1

U.S. - Massachusetts – Right to Know Hazardous Substance List
Aluminum Oxide 1344-28-1

U.S. - Pennsylvania – Right to Know Hazardous Substance List
Aluminum Oxide 1344-28-1

International Air Transport Authority (IATA)
Not regulated

SECTION 16: Other Information

NFPA Hazard Classification
Health: 1 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 1 **Flammability:** 0 **Physical Hazard:** 0 **Personal Protection:** B

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

0=minimal hazard 1=slight hazard 2=moderate hazard 3=serious hazard 4=extremely hazard

Reference:
UNEP Publications, OECD SIDS, Chemical Abstract Search (CAS) Database, European Chemicals Agency (ECHA), Workplace Hazard Material Information System (WHMIS)

The above information and recommendation are believed to be accurate and reliable. However, no warranty, either expressed or implied, is made as to its accuracy or completeness and none is made as to fitness of this material for any purpose. The manufacturer or supplier shall not be liable for damages to person or property resulting from its use. Nothing herein shall be construed as a recommendation for use in violation of any patent.

Manufacturer Issue Date: 12/15/14 **Supplier Review Date:** 12/07/15