
1. Identification

(a) Product identifier used on the label:

Aluminum Oxide, Chromatography Grade

(b) Other means of identification:

Synonyms: Blended Alumina

Grades: Acidic, Neutral, Basic

Isco Part Numbers: 605394487, 605394488, 605394489

CAS Number: Mixture

(c) Recommended use of the chemical and restrictions on use:

Chromatography Media, Desiccant

(d) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Teledyne Instruments, Inc. d/b/a Teledyne Isco

4700 Superior Street

Lincoln, NE 68504

Telephone: (402)464-0231

(e) Emergency phone number:

ChemTel (Contract Number MIS8758990)

United States, Canada, Puerto Rico, and the U.S. Virgin Islands:

Toll Free: (800) 255-3924

International Access:

+01-813-248-0585

2. Hazard(s) Identification

(a) Classification of the chemical:

This product is not classified as hazardous according to the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200)

(b) Signal word, hazard statement(s), symbol(s) and precautionary statement(s): Not Applicable

(c) Hazards not otherwise classified:

Inhalation: May cause dryness and irritation to mucous membranes, nose, and throat.

Symptoms may include coughing, sore throat, wheezing, and non-specific chest illnesses.

Skin Contact: May cause irritation with dryness and abrasion.

Eye Contact: May cause irritation, redness, and pain.

3. Composition/Information on Ingredients

Ingredient:	CAS Number:	Percent:
Aluminum Oxide	1344-28-1	90-95%
Water	7732-18-5	5-10%

4. First-Aid Measures

- Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.
- Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
- Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.
- Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

5. Fire-Fighting Measures

- Fire: Not considered to be a fire hazard.
- Explosion: Not considered to be an explosion hazard.
- Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
- Special Information: Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

- (a) Personal precautions, protective equipment:
Wear gloves, safety glasses or goggles and dust mask. If use requires manual handling, wear long sleeves and close-weave cotton glove with tight-fitting wristlets.
- (b) Methods and materials for containment and cleaning up:
Let any dust settle, then vacuum or sweep up material and place into a suitable disposal container. Avoid generating further dusty conditions by using a vacuum or wet sweeping.

7. Handling and Storage

- (a) Precautions for safe handling:
Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.
- (b) Conditions for safe storage:
Keep dust away from ignition source. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids). Take precaution to avoid accumulation of static charge.

8. Exposure Controls/Personal Protection

- (a) Airborne Exposure Limits:
Amorphous Silica: OSHA Permissible exposure Limit (PEL) – 80 mg/m³ / %SiO₂
ACGIH Threshold Limit Value (TLV): 10 mg/m³ (TWA) inhalable particulate; 3 mg/m³ (TWA) respirable particulate.
- (b) Appropriate engineering controls:
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

8. Exposure Controls/Personal Protection (continued)

(c) Individual protection measures, personal protective equipment (PPE):

If its use requires manual handling, wear long sleeves and close-weave cotton gloves with tight-fitting wristlets. If dusty conditions prevail, use of an approved NIOSH/MSHA dust respirator is recommended. Wear goggles if dust causes eye discomfort.

9. Physical and Chemical Properties

(a) Appearance (physical state, color, etc.):	Dry, white powder
(b) Odor:	Odorless
(c) Odor threshold:	N/A
(d) pH:	2.5 – 8.3
(e) Melting point/freezing point:	1610 °C
(f) Initial boiling point and boiling range:	2230 °C
(g) Flash point:	N/A
(h) Evaporation rate:	N/A
(i) Flammability (solid, gas):	N/A
(j) Upper/lower flammability or explosive limits:	N/A
(k) Vapor pressure:	N/A
(l) Vapor density:	N/A
(m) Specific Gravity:	2.20
(n) Solubility (ies):	Insoluble in water.
(o) Partition coefficient: n-octanol/water:	N/A
(p) Auto-ignition temperature:	N/A
(q) Decomposition temperature:	N/A
(r) Viscosity:	N/A

10. Stability and Reactivity

(a) Reactivity:	See below
(b) Chemical stability:	Stable under ordinary conditions of use and storage
(c) Possibility of hazardous reactions:	See below
(d) Conditions to avoid:	Ignition sources, dusting, moisture and incompatibles
(e) Incompatible materials:	Hydrogen fluoride, Strong bases
(f) Hazardous decomposition products:	Will not occur

11. Toxicological Information

- (a) Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact);
- (b) Symptoms related to the physical, chemical and toxicological characteristics;
- (c) Delayed and immediate effects and also chronic effects from short- and long-term exposure; and
- (d) Numerical measures of toxicity (such as acute toxicity estimates):

No LD50/LC50 information found relating to normal routes of occupational exposure.

(e) NTP / IARC / OSHA Carcinogen Listing:

Ingredient:	IARC:	Category:
Silica, Amorphous: SiO ₂	7631-86-9	3

12. Ecological information

- (a) Ecotoxicity (aquatic and terrestrial);
- (b) Persistence and degradability;
- (c) Bioaccumulative potential;
- (d) Mobility in soil;
- (e) Other adverse effects: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

- (a) UN number;
- (b) UN proper shipping name;
- (c) Transport hazard class(es);
- (d) Packing group, if applicable;
- (e) Environmental hazards (e.g., Marine pollutant (Yes/No));
- (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code);
- (g) Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises:

US DOT & Canada, Transport by sea, Transport by air: Not regulated for transport

15. Regulatory Information

15.1 US Federal Regulations

Toxic Substances Control Act (TSCA) Section 8(b): This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

CERCLA Regulated Chemicals: This material does not contain any CERCLA regulated chemicals.

SARA Title III - Section 302 - Notification and Information: This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class: This material is not considered a hazard.

SARA Title III - Section 313 - Toxic Chemical Release Reporting: This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants): This material does not contain any hazardous air pollutants.

15.2 US States Regulatory Reporting

CA Proposition 65 Carcinogens: This product does not contain any substances known to the State of California to cause cancer.

15. Regulatory Information (continued)

CA Proposition 65 Reproductive Toxins: This product does not contain any substances known to the State of California to cause reproductive harm.

Massachusetts Substance List: This material contains no listed components.

New Jersey Right-to-Know Hazardous Substance List: This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List: This material contains no listed components.

15.3 Canadian Regulations:

Canadian Domestic Substance List WHMIS (Canada): Not controlled under WHMIS (Canada) CEPA DSL: SILICA GEL

15.4 International Regulations:

EINECS, DSCL (EEC): SILICA GEL 231-545-4 - R36/37/38 - Irritating to eyes, respiratory system and skin.

International Lists:

- Australia (NICNAS): SILICA GEL
- Japan (MITI): SILICA GEL
- Korea (TCCL): SILICA GEL
- Philippines (RA6969): SILICA GEL
- China: No products were found
- USA: TSCA

16. Other Information

NFPA 704 (National Fire Protection Association):

Health: 1, Flammability: 0, Reactivity: 0, Others: None

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide):

Health: 1, Flammability: 0, Physical Hazard: 0, PPE: 0

This SDS has been prepared to meet the requirements defined in 29CFR1910.1200 - Hazard Communication, and its appendices; and organized per Table D.1. Teledyne Isco provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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