

1. Chemical Product and Company Identification

Trade Name: NYACOL® AL25-SD
Chemical Name: Aluminum Hydroxide Oxide
Synonyms: Alumina Monohydrate Powder
Product Code: AL25-SD
Use: Ceramics, Textiles, Papermaking
Manufacturer: Nyacol Nano Technologies, Inc.
Megunko Road, P.O. Box 349, Ashland MA 01721 U.S.A.
508-881-2220
Emergency Telephone: CHEMTREC: 800-424-9300
E-mail Contact: info@nyacol.com

2. Composition / Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>Exposure Limits</u>	<u>Percent By Weight</u>
Aluminum Hydroxide Oxide:	24623-77-6	2 mg/M ³	94
Nitric Acid:	7697-37-2	5 mg/M ³	2
Water:	7732-18-5	None.	4

<u>Component</u>	<u>EINECS#</u>	<u>RTECS#</u>	<u>REACH #</u>
Aluminum Hydroxide Oxide:	246-368-8	BD0950000	05-2117294577-26-0000
Nitric Acid:	231-714-2	QU5775000	05-2117294593-32-0000
Water:	231-791-2	ZC0110000	None.

3. Hazard Identification

Emergency Overview White powder. No odor. Keep spills out of surface waters.

Classification Not harmful.
Symbol: None.
Risk Phrases: None.
Safety Phrases: None.

Potential Health Effects / Health Hazard Identification

Acute Exposure:

Eye: Irritant.
Skin: Irritation, drying or cracking of skin due to drying effects.
Ingestion: Not available.
Inhalation: Not available.
Chronic Exposure: Not available.

Other Hazards:

Known Synergists: None known.
Explosion Hazard: None known.
Fire Hazard: None known.
Corrosion Hazard: Not available.

4. First Aid Measures

Eye Contact: Flush eyes with large quantities of water. If irritation persists get medical attention.
Skin Contact: Wash with soap and water.
Ingestion: Give water. Do not induce vomiting. Seek medical professional. Never give anything by mouth to an unconscious person.
Inhalation: Remove person from exposure. Consult medical professional.
First Aid Facilities: Eye wash station.
Advice to Physicians: Not available.

5. Firefighting Measures

Flammability:	Not flammable. Material will not burn in a fire.
Extinguishing Media:	All are acceptable.
Protective Equipment:	Wear standard full firefighting turn-out gear (full bunker gear), and respiratory protection (SCBA).
Special Exposure Hazard:	None known.

6. Accidental Release Measures

Leaks and Spills:	Contain spill or leak. Recover for recycle or disposal. Do not allow spills into sewers or surface waters. Place waste products and contaminated soil into containers for disposal.
Personal Protection	Wear eye protection and impervious gloves. An approved air-purifying respirator should be worn if dust or mist is present.

7. Handling and Storage

Handling:	Avoid generating mist or dust during use.
Storage:	Store in cool dry area.

8. Exposure Controls / Personal Protection

Engineering Control:	Use exhaust ventilation to keep airborne concentrations below exposure limits.
Respiratory Protection:	When respiratory protection required or concentrations unknown, use approved air-purifying respirator with dust cartridge.
Skin Protection:	Clean body-covering clothing; impervious gloves e.g. neoprene.
Eye Protection:	Wear approved safety glasses.

9. Physical and Chemical Properties

Appearance:	White powder
Odor:	None.
Physical State:	Solid. NYACOL® AL25-SD is a dry powder material.
pH:	Not applicable.
Boiling Point:	Not applicable.
Freezing Point:	Not applicable.
Flash Point:	None.
Vapor Pressure:	Not determined.
Oxidizing Properties:	Not an oxidizer.
Solubility in Water:	Soluble in all proportions.
Density:	3,000 Kg/M ³
Specific Gravity:	3.0 (water = 1)
Volatile by Weight:	4
Viscosity:	Not applicable.
Explosion Limits:	Not applicable.
Partition Coefficient:	Not applicable.
Evaporation Rate:	Not determined.

10. Stability and Reactivity

Chemical Stability:	AL25-SD is stable under normal ambient and anticipated storage conditions.
Conditions To Avoid:	No recommendation.
Incompatibility With Other Materials:	Not available.
Hazardous Decomposition Products:	Oxides of nitrogen.
Hazardous Polymerization:	Will not occur.

11. Toxicological Information

<u>Material</u>	<u>LD₅₀, Rat, Oral</u>
Aluminum Hydroxide Oxide:	>2.000 mg/kg
Nitric Acid:	>90 mL/kg
Water:	None reported.

Effects

Eye Effects:	No published data available. This material may be irritating.
Skin Effects:	No published data available. Dry skin has been reported.
Inhalation Effects:	Not available.
Ingestion Effects:	Not available.

12. Ecological Information

Ecotoxicity:	Not available.
Persistence:	Not available.

13. Disposal Considerations

Disposal Considerations:	Dispose of the solids in a landfill.
United States:	Not an RCRA regulated waste.

14. Transport Information

<u>Regulations</u>	<u>Shipping Name</u>	<u>Hazard Class</u>	<u>Packing Group</u>	<u>U.N. Number</u>
U.S. D.O.T.:	Not applicable	Not applicable	Not applicable	Not applicable
ICAO / IATA:	Not applicable	Not applicable	Not applicable	Not applicable
IMO / IMDG:	Not applicable	Not applicable	Not applicable	Not applicable
ADR:	Not applicable	Not applicable	Not applicable	Not applicable

15. Regulatory Information

U.S. Federal Regulations

EPA TSCA Inventory:	All ingredients listed.
SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

<u>Chemical Name</u>	<u>CAS #</u>	<u>Percent By Weight</u>
Nitric Acid	7697-32-2	2

D.O.T. Regulations:	See Section 14.
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U.S. State Regulations

California Proposition 65:	No ingredients listed.
State Right-to-Know Laws:	Section 2 lists all components of AL25-SD.

Canadian Regulations

Domestic Substance List:	All ingredients listed.
WHMIS:	Aluminum Hydroxide Oxide: Not controlled. Nitric Acid: Disclose at 1%.
Transportation of Dangerous Goods:	Not applicable, do not meet dangerous goods criteria.

Controlled Products Regulations:	This MSDS contains all the information items specified in Schedule 1, Column 3 of the Controlled Products Regulations in a 16-heading format.
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EC Regulations

Classification:	Not harmful.
Symbol:	None.
Risk Phrases:	None.
Safety Phrases:	None.

16. Other Information

NFPA 704 Hazard Rating: Health - 0, Flammability - 0, Reactivity - 0, Special - None
HMIS[®] Hazard Rating: Health - 1, Flammability - 0, Reactivity - 0
Protective Equipment - E; safety glasses, gloves, dust respirator
Recommended Use: NYACOL AL25-SD is recommended for use in ceramics, textiles and papermaking. Other uses have not been investigated and may have other hazards. For industrial use only, not for food, drug or home use.
Work Alert: Workers using AL25-SD should read and understand this MSDS and be trained in the proper use of this material.
MSDS Prepared By: Robert J. Nehring, Jr.
Nyacol Nano Technologies, Inc.
Telephone: 508-881-2220 U.S.A.
Revision Date: October 11, 2012
Supersedes: None

This MSDS has been prepared with data from Nyacol Nano Technologies, Inc.'s laboratories and government publications.

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