



Activated Alumina MATERIAL SAFETY DATA SHEET Rev. date: December 28, 2001

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Activated Alumina **Rev. date:** December 28, 2001

Supplier: Pioneer Air Systems Inc.
210 Flatfork Road
Wartburg, TN 37887-3201 U.S.A.
Tel: (423)-346-6693
Fax: (423)-346-3865

Synonyms: Activated Alumina grade A & AA, alumine activée grade A & AA, Aluminum oxide, Alumina desiccant, Catalit alumina, Adsorbent alumina.

Appearance and odor: White powder or granules; odorless.

Uses: Catalyst support, desiccant, absorbent, adsorbent.

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

EC Directive

Name Cas# LD50 LC50 Symbol R phrases Conc.
Aluminum oxide 1344-28-1 Unknown Unknown None None 93-95%
Moisture 7732-18-5 None None None None 3-5%

SECTION 3. HAZARDS IDENTIFICATION

Not hazardous.

SECTION 4. FIRST AID MEASURES

Inhalation: If overcome by high dust concentrations, remove to a ventilated area.

Skin contact: Wash skin thoroughly with soap and water.

Eye contact: Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician. Do not scrub, since the abrasion may cause irritation.

Ingestion: Not Applicable.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media: Non combustible.

Hazardous combustion products: Not applicable.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Collect solids. Recycle if possible.

SECTION 7. HANDLING AND STORAGE

Handling precautions: Avoiding generating dust during handling.

Storage conditions: Not applicable.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Provide general and local ventilation to maintain concentrations of air contaminants below recommended standards. Wear eye and respiratory protection (goggles and mask), or a full-face respirator if necessary.

Exposure Limits:

(ACGIH = American Conference of Governmental Hygienists; TLV = Threshold Limit Value; OSHA = Occupational Safety and Health Administration (USA); PEL = Permissible Exposure Limit; TWA = Time-Weighted Average; STEL = Short Term Exposure Limit; Ceiling = Ceiling Value)

ACGIH (TLV) OSHA (PEL)

TWA STEL TWA Ceiling

Aluminum oxide (total dust) 10mg/m³ None 15mg/m³ None
Respirable dust None None 5mg/m³ None

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PH:	Not applicable flashpoint: Not applicable.
Boiling point	Not applicable autoignition temp.: Not applicable.
Melting point	2050°C lower flammable limit: Not applicable.
Vapor pressure	Not applicable higher flammable limit: Not applicable.
Vapor density(air=1):	Not applicable odor threshold: Not applicable.
Evaporation rate	Not applicable explosive properties: Not applicable.
Relative density(water =1):	3.0 – 3.7 oxidizing properties: Not applicable.
Water solubility:	Insoluble partition coefficient(n-octanol/water):Not applicable.



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SECTION 10. STABILITY AND REACTIVITY

Stable: (yes/no): Yes

Conditions and material to avoid: Not applicable.

Hazardous decomposition products: Not applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Routes of exposure: inhalation: Yes ingestion: No

Eye contact: No skin contact: No skin absorption: No

ACUTE EFFECTS:

Inhalation: Inhalation of high concentrations of these inert nuisance particulates can result in mild Irritation of the respiratory tract.

Skin contact: May cause irritation through mechanical abrasion.

Eye contact: May cause irritation through mechanical abrasion.

Ingestion: Not applicable.

CHRONIC EFFECTS:

Medical conditions aggravated by exposure to the product: Not applicable.

Carcinogenicity / Mutagenicity / Reproductive toxicity: None of the ingredients present at concentrations equal to or greater than 0.1% are listed as carcinogen or potential carcinogen by LARC, NTP or OSHA, (LARC=International Agency for Research on Cancer; NTP=National Toxicology Program (USA); OSHA=Occupational Safety and Health Administration (USA).

Supplementary information: Activated alumina may adsorb certain gases and liquids. While alumina itself is principally inert, it may exhibit properties of the adsorbed material.

SECTION 12. ECOLOGICAL INFORMATION

No effects are expected from this insoluble product because insolubility leads to non-bioavailability.

SECTION 13. DISPOSAL CONSIDERATIONS

Recycle if possible. This substance is inert and does require special disposal methods. Dispose of waste in accordance with federal, state, or local regulations.

SECTION 14. TRANSPORT INFORMATION

TDGR: Not regulated CFR 49: Not regulated IMO: Not regulated ICAO: Not regulated

IATA: Not regulated (TDGR= Transport of Dangerous Goods Regs. (Canada); CFR 49= Code of Federal Reg. (USA);

IMO International Maritime Organization; ICAO= International Civil Aviation Organization; IATA=International Air Transport Association)

SECTION 15. REGULATORY INFORMATION

WHMIS CLASSIFICATION (Canada): Not controlled

EFC CLASSIFICATION (Europe): Not classified

Warning symbol: None

Warning word: None

Risk phrases: None

Safety phrases: None

USA REGULATIONS:

Section 313 Supplier Notification

This product contains no chemical in concentrations subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (Title III of SARA) and of 40 CFR 372.

TSCA-DSL (USA – Canada)

This substance or all the ingredients of this products are on the Domestic Substance List (DSL – Canadian Environmental Protection Act (Canada) as well as a Chemical Substance Control Act (TSCA inventory (USA)). The presence on these lists does not require any legal reporting.

SECTION 16. OTHER INFORMATION

National Fire Protection Agency (NFPA) codes: (Health, Flammability, Reactivity): 0,0,0

Hazardous Material Information Systems (HMIS) codes: (Health, Flammability, Reactivity): 0,0,0

Abbreviations:

CAS #= Chemical Abstracts Service Registry Number; EC= European Community; LD50= Lethal dose 50%; LC50= Lethal concentration 50%; LCL0= lowest published lethal concentration.

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