



Safety Data Sheet

In accordance with CFR 1910.1200 (OSHA HCS)

SDS No. 61

Review date: October 19, 2018

1 Identification of substance and company

Product name: Aluminum oxide
Product code: 12700, 13931, 15668, 17350, 18318, 90419, 90454, 90511, 90538
90818, 90826
Relevant identified uses of the substance: Research and product development
Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: 210-691-2000
Fax: 210-691-2600
Web site: www.noahtech.com
Emergency information: CHEMTREC
800-424-9300

2 Hazards identification

Emergency Overview:
GHS classification of the substance: Not a hazardous substance
GHS label elements: None
Hazards not otherwise classified: None
HMIS ratings (scale 0-4):
Health hazard: 1
Flammability: 0
Physical hazard: 0

3 Composition/Information on ingredients

Chemical name: Aluminum Oxide
Designation: (CAS#): 1344-28-1
EC number: 215-691-6
Formula: Al₂O₃
Synonyms: Alumina

4 First aid measures

After inhalation: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Only qualified personnel should administer oxygen. Get medical attention.
After skin contact: Wash with soap and water. If irritation persists seek medical advice.
After eye contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers. If irritation persists, seek medical advice.
After ingestion: If conscious, rinse mouth out with water. Never give anything by mouth to an unconscious person. Seek medical advice.
Information for doctor: Show this safety data sheet to the doctor in attendance

5 Fire-fighting measures

Suitable and unsuitable extinguishing agents: Use water spray, carbon dioxide, dry chemical, earth, sand, or foam. Use extinguishing media most suitable to surrounding conditions.
Special hazards caused by the material, its products of combustion or resulting gases: None
Special fire fighting procedures: Wear self-contained breathing apparatus. Always wear full fire fighting equipment/clothing in fire situations
Additional Information: Do not use halocarbon extinguishers.

6 Accidental release measures

Person-related safety precautions: Always wear personal protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray.
Measures for environmental protection: Prevent spread or spill. Sweep or scoop up and remove. Avoid raising dust. Ventilate area and wash spill after material pickup is complete. Do not allow material to be released to proper the environment without governmental permits.

Measures for cleaning/collecting:	Sweep or scoop up and remove. Keep in suitable, closed containers for disposal. Dispose of contaminated material as waste according to item 13
Additional information:	See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for information on disposal See Section 15 for regulatory information

7 Handling and storage

Information for safe handling:	Keep container tightly sealed. Store in cool, dry place. Ensure good ventilation/exhaust at the workplace
Storage requirements to be met by storerooms and containers:	No special requirements.
Incompatibility (avoid contact with):	Strong acids. Strong bases. Chlorine trifluoride, ethylene oxide, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, hot chlorinated rubber
Further information about storage conditions:	None

8 Exposure controls/personal protection

Ventilation requirements:	Always maintain exposure below permissible exposure limits. Local exhaust.
Components with exposure limits that require monitoring:	ACGIH TLV: TWA 10 mg/m ³
Additional information:	None
General protective and hygienic measures:	The usual precautionary measures for handling chemicals should be adhered to Keep away from foodstuffs, beverages and food Instantly remove any soiled and impregnated garments Wash hands during breaks and at the end of the work Avoid contact with the eyes and skin
Personal protective equipment:	
Respiratory protection:	Only use NIOSH/MESA or CEN approved equipment. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.
Hand protection:	Neoprene / Natural rubber / Impervious
Eye protection:	Safety glasses / goggles
Skin protection:	Protective work clothing
Additional protective equipment:	Sufficient to prevent contact. Emergency eyewash and safety shower.

9 Physical and chemical properties

Physical state:	Solid
Color:	White to gray powder or off-white pieces
Odor:	Odorless
Molecular Weight (Calculated):	101.96
pH	Not determined
Melting point/freezing point/range:	2050 C
Boiling point/range:	2977 C
Sublimation temperature/start:	Not determined
Flash point:	Non-flammable
Autoignition temperature:	Not determined
Danger of explosion:	Not determined
Flammable limits:	
Lower:	Not determined
Upper:	Not determined
Evaporation Rate:	Not determined
Vapor pressure (mm Hg):	Not determined
Specific gravity:	3.5-4.0 g/cm ³ @ 20 C
Solubility in/Miscibility with water:	Practically insoluble

10 Stability and reactivity

Chemical stability:	Stable
Conditions to be avoided:	N/A See section 7 for information on proper handling and storage
Materials to be avoided:	Strong acids. Strong bases. Chlorine trifluoride, ethylene oxide, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, hot chlorinated rubber
Hazardous Decomposition products:	Oxides of aluminum

11 Toxicological information

LD/LC50 values that are relevant for classification:	oral-rat LD ₅₀ : > 2000 mg/kg
Primary irritant or corrosive effect: on the skin:	Mild irritation
on the eye:	None

Potential health effects:

Inhalation:

May cause mild pulmonary irritation. Inhalation of dust may cause lung damage (Shaver's disease)

Signs and symptoms of exposure:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

12 Ecotoxicological information

General Notes:

No ecological data available

13 Disposal considerations

Recommendation:

Consult state, local or national regulation for proper disposal
Allow professional disposal company to handle waste
Must be specially treated under adherence to official regulations

Unclean packagings recommendation:

Disposal must be made according to official regulations

14 Transport information

Land transport DOT

Proper shipping name:

Chemicals Non-Hazardous

Technical name:

Aluminum oxide

Air transport ICAO-TI and IATA-DGR:

Proper shipping name:

Chemicals Non-Hazardous

Technical name:

Aluminum oxide

UPS Ground / FedEx Ground

Proper shipping name:

Chemicals Non-Hazardous

Technical name:

Aluminum oxide

UPS Air

Proper shipping name:

Chemicals Non-Hazardous

Technical name:

Aluminum oxide

15 Regulatory information

SARA Section 302 Extremely Hazardous components and corresponding TPQs:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA Section 311 / 312 hazards:

Acute health hazard; Chronic health hazard

SARA Section 313 components:

The following components are subject to reporting levels established by SARA Title III, Section 313:
CAS No.: 1344-28-1 (Revision Date: 1994-04-01)

California Proposition 65 components:

This product does not contain any chemicals know to State of California to cause cancer, birth defects, or any other reproductive harm

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.