

Zhejiang Zili Advanced Materials Co., Ltd
MSDS for Tabular Alumina

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Tabular Alumina
 FORMULA: Al₂O₃ (≥ 99.0%)
 Producer: Zhejiang Zili Advanced Materials Co.,Ltd Chinese Origin
 PHONE: +86 575-82112629
 DESCRIPTION: Tabular Alumina generally contains 99.0% alumina at least. The remaining components are not considered hazardous.

2. INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	WEIGHT	Germany OEL(TWA)	OSHA -PEL	ACGIH TWA	MEL
Alpha alumina CAS No.: 1344-28-1	≥ 99.0	3.0mg/m ³ 6.0mg/m ³ (a)	=15 mg/m ³ TWA total dust =5mg/m ³ TWA respirable fraction	10 mg/m ³ TWA particulate matter containing no asbestos and <1% crystalline silica	N/A

* The value is for inhalable (total) particulate matter containing no asbestos and <1% crystalline silica.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Non-flammable brown solid or powder. May cause minor eye and skin irritation. Inhalation of high concentrations may cause transient upper respiratory irritation. Particulate matter may scratch the eyes.

POTENTIAL HEALTH EFFECTS

EYE contact : Contact with eyes may cause irritation

SKIN contact: May cause Eye/Skin irritation.

INGESTION: Ingestion may cause irritation to mucous membranes.

INHALATION: May cause irritation of respiratory tract

CLASSIFICATION: Not Dangerous

CANADIAN HAZARD SYMBOL: Not applicable

AGGRAVATED MEDICAL CONDITIONS: Asthma
Lung irritation
Dermatitis

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POTENTIAL HEALTH EFFECTS (continued)

CHRONIC: Long-term dust inhalation in excess of the PEL or TLV may decrease the ability of the lungs to clear particulate matter which may cause shortness of breath and increased susceptibility to respiratory disease.

TARGET ORGANS: Lungs

CARCINOGENICITY: NTP: No IARC: No OSHA: No

4. FIRST AID MEASURES

EYE: Flush eyes with lukewarm water for 15 minutes opening and closing eyelids to ensure adequate rinsing. If redness, irritation, pain, or tearing occurs, seek medical attention.

SKIN: Exposure not anticipated.

INHALATION: Not anticipated. If inhalation of high concentrations occurs, remove to fresh air. If breathing problems occur, a certified professional should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.

INGESTION: None required.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT:	Not Applicable	
FLAMMABLE LIMITS:	LEL: Not Applicable	UEL: Not Applicable
NFPA CLASSIFICATION:		
HEALTH: 0	FLAMMABILITY: 0	INSTABILITY: 0

EXTINGUISHING MEDIA: Any. Use media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARDS: Non-flammable, non-combustible. Product will not burn.

HAZARDOUS DECOMPOSITION PRODUCTS: None

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH approved full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear.

6. ACCIDENTAL RELEASE MEASURES

Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Do not walk through spilled material. Vacuum small amounts. Gently shovel or scoop larger amounts into clean dry container for later recycle or disposal. Water mist may be added as necessary to control the level of airborne dusts. Protective equipment for clean-up personnel depends on the level of exposure anticipated (See Section 8).

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7. HANDLING AND STORAGE

Store in dry area in closed containers. Storage and work areas should be periodically cleaned to minimize dust accumulation. Avoid dust inhalation and promulgation. DO NOT use compressed air or dry sweeping to remove dust from work area. Dusts should be removed using an appropriately equipped vacuum. If an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. wet sweeping, misting, etc.). Moisture should be added as necessary to reduce exposure to airborne respirable dust.

Under dusty conditions, employees should wear coveralls or other suitable work clothing. Vacuum dusty clothing before removal.

Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY: Under normal working conditions, below acceptable exposure guidelines, none is required. For concentrations above the PEL but less than 10 X the PEL, a NIOSH approved dust mist respirator should be worn. Appropriate respirator selection will be dependent upon the magnitude of exposure and should be selected in accordance with 29 CFR 1910.134.

SKIN: None required.

EYES: Safety-glasses with side shields or goggles to prevent dust and particles from entering the eye.

ENGINEERING CONTROLS: General ventilation. Local exhaust and enclosed processes may be necessary for processes which generate large quantities of airborne dust.

OTHER: None

9. PHYSICAL AND CHEMICAL PROPERTIES

AUTOIGNITION TEMPERATURE:	Does not ignite
BOILING POINT/RANGE:	+3400 °C
SOLUBILITY:	Insoluble
DENSITY:	3.5-3.9g/cm ³
BULK DENSITY:	>3500kg/m ³
MELTING POINT:	+ 2040 °C
Resk of explosion:	None

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10. STABILITY AND REACTIVITY

STABILITY: Stable

REACTIVITY/ INCOMPATIBILITY: Aluminum oxide reacts violently with chlorine trifluoride producing flames. Ethylene oxide polymerizes violently when in contact with pure aluminum oxide. Aluminum oxide is also incompatible with hot chlorinated rubber, acids and oxidizers.

DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: Will not occur

11: TOXICOLOGICAL INFORMATION

EYE: Particulate matter may cause physical injury to the eye.

SKIN: May cause minor irritation.

INHALATION: May cause minor transient respiratory irritation.

INGESTION: Ingestion of large quantities may result in gastrointestinal irritation and eventually interference with phosphate absorption which results in rickets.

CHRONIC: May studies indicate that aluminum oxide dust acts as an "inert" material when inhaled.

SUBCHRONIC: No Data

OTHER: Implantation of aluminum oxide into rats has resulted in tumors at the site of application. Intrapleural administration of 90mg/kg aluminum oxide has resulted in tumors of the lungs, thorax or respiratory system.

12: ECOLOGICAL INFORMATION

alpha alumina is relatively inert. It does not contain ozone depleting substances and is not expected to exert an ecotoxic effect or bio-concentrate in the food chain.

13. DISPOSAL CONSIDERATIONS

Dispose of according to applicable federal, state and local regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation(DOT): Not Classified

IMDG/IMO: not regulated

RID: not regulated

ADR: not regulated

ICAO: not regulated

IATA: not regulated

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15. REGULATORY INFORMATION

CANADIAN WHIMIS: Not Classified

EPCRA SECTION 301(EHS S): This product does not contain ingredients subject to reporting requirements of 40 CFR Part 355, appendices A and B (Extremely Hazardous Substances).

CERCLA SECTION 304: This product does not contain ingredients subject to state and local reporting under Section 304 of SARA Title III as listed in 40CFR Part 302, Table 302.4

SARA 313 REPORTING REQUIREMENTS: This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and by definition meets the requirements of the following category:
Acute Health Hazard

TSCA (Toxic Substances Control Act): All ingredients contained in this product are on the TSCA inventory.

16. OTHER INFORMATION

Revision Date: 5/7/98 added TSCA information.
10/3/00 reissued with no changes.
8/27/01 updated new area code for manufacturing facility.
8/15/03 Health and safety review and update

KEY:

ACGIH: American Conference Of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
(C): Ceiling Limit
DOT: Department of Transportation
IARC: International Agency for Research on Cancer
MSHA: Mine Safety and Health Administration
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
SARA: Superfund Amendment and Reauthorization Act
TLV: Threshold Limit Value

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DISCLAIMER

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