



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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EPM00126 CSX-156B
Revised 30-JUN-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Use

CMP

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont Air Products NanoMaterials L.L.C.
2441 W.Erie Dr.
Tempe
AZ
United States
85282

PHONE NUMBERS

Product Information : (800)441-7515(outside U.S. 302-774-1000)
Transport Emergency : (800)424-9300(outside U.S. 703-527-3887)
Medical Emergency : (800)441-3637(outside U.S. 302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Alumina	1344-28-1	10-20

HAZARDS IDENTIFICATION

Emergency Overview

Milky white suspension with no odor. Causes eye irritation and may cause skin irritation.

Potential Health Effects

INHALATION

No adverse effect expected.

EYE CONTACT

Causes irritation.

SKIN CONTACT

May cause skin irritation.

INGESTION

No information is available.

(HAZARDS IDENTIFICATION - Continued)

TARGET ORGANS

Skin and Eyes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Overexposure may aggravate existing skin conditions.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary.

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Treat symptomatically as required by the condition of the patient.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : None
Autoignition : None
Flammable limits in Air, % by Volume
LEL : None
UEL : None

Extinguishing Media

Use media appropriate for surrounding material.

Fire Fighting Instructions

This material is not flammable. Use normal firefighting procedures for the area.

UNUSUAL FIRE AND EXPLOSION HAZARDS.
No special precautions are necessary.

HAZARDOUS COMBUSTION PRODUCTS
None.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container. Comply with Federal, State, and local regulations for reporting releases.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Use with sufficient ventilation to keep employee exposure below recommended limits. Wash thoroughly after handling. Wash clothing after use.

Handling (Physical Aspects)

Keep container tightly closed.

(HANDLING AND STORAGE - Continued)

Storage

Store in original container.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation.

Personal Protective Equipment

EYE/FACE PROTECTION: Wear safety glasses or coverall chemical splash goggles.

RESPIRATORS: Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH approved respiratory protection.

PROTECTIVE CLOTHING: Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket.

Exposure Guidelines

Applicable Exposure Limits

Alumina

PEL (OSHA)	: 15 mg/m ³ , total dust, 8 Hr. TWA 5 mg/m ³ , respirable dust, 8 Hr. TWA
TLV (ACGIH)	: Notice of Intended Changes (2007) Withdraw Adopted Documentation and TLV; See NIC Entry for Aluminum Metal and Insoluble Compounds
AEL * (DuPont)	: None Established

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	: 212 F (100 C)
Vapor Pressure	: Not Available
Vapor Density	: >1 (Air=1.0)
Evaporation Rate	: Not Available
Solubility in Water	: Insoluble Solids
pH	: 3-5
Odor	: None.
Color	: Milky, White.
Specific Gravity	: ~1.1 @ 25 C (77 F)

(PHYSICAL AND CHEMICAL PROPERTIES - Continued)

Form : Slurry.

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None have been identified.

Decomposition

Decomposition will not occur.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

No data are available for this product. Data for a component are listed below.

Data for Alumina

INHALATION

LC50, rat (4 hr): >1.89 mg/l (no deaths). Excessive exposure may cause cough, mucous production, and shortness of breath. Respiratory effects typically associated with inhalation of particulates and lung overload have occurred in animals.

EYE CONTACT

Dust may cause mechanical irritation, based on human experience.

SKIN CONTACT

May cause irritation with redness and pain, based on human experience.

INGESTION

No information available.

GENOTOXICITY

No information available.

TARGET ORGANS

Skin, eyes, and respiratory tract.

(TOXICOLOGICAL INFORMATION - Continued)

CHRONIC TOXICITY

Chronic exposure of workers to aluminum containing dusts or fumes has caused fibrosis, emphysema and pneumothorax.

ECOLOGICAL INFORMATION

Ecotoxicological Information

No data is available for this product. Data for Alumina is summarized below.

Data for Alumina, A component of CSX-156B

Aquatic Toxicity

Not expected to be harmful to aquatic organisms.

FATE

In soil and sediment, aluminum is complexed with other electron rich species such as fluoride, sulfate, and phosphate. In water, hydrated aluminum ions may undergo "hydrolysis" to form various hydroxyaluminum species, depending on pH. Aluminum is only sparingly soluble in water between pH 6 and pH 8, so concentrations in most surface water are low. No atmospheric transformations are expected to occur.

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

Incineration at a facility with proper Federal and State issued permits is the recommended method for disposal.

Container Disposal

Observe all label warnings. Empty containers may contain hazardous residue. Refer to applicable Local, State/Provincial, and Federal Regulations, as well as industry Standards.

Do not distribute, make available, or reuse empty containers except for storage and shipment of original product. Remove all hazardous product residue, and puncture or otherwise destroy empty containers before disposal. Consult 40 CFR, Parts 261 and 268 for guidance on disposal.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO/IATA
Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

This product complies with TSCA inventory reporting requirements.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION
ACT)

311/312 Hazard Categories: None

313: This product contains no substance(s) that are
subject to the report requirements of Section 313 of the
Emergency Planning and Community Right-To-Know Act of 1986
and of 40 CFR 372.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION AND LIABILITY
ACT)
Not reportable.

We recommend you contact local authorities to determine if
there may be other local reporting requirements.

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating	
Health	: 1
Flammability	: 0
Reactivity	: 0

Additional Information

Because the long-term human health effects from exposure to
CSX-156B have not been fully evaluated,
exposure should be kept to the lowest level possible.

This material is for industrial use. Use only
under the supervision of a technically qualified individual.

(Continued)

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : DuPont AirProducts Nanomaterials LLC
MSDS Coordinator
Telephone : (757) 686-8663 or (919) 248-5027

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS