

MSDS Code: VPA149

Activated Alumina: ABS, CG-20, CPN, CSS Series, DD-420, DD-431, DD-440, DD-443, DD-447, DD-470, DD-6, DD-PG, F-200, F-220, HF-200, LD-5, S-100, S-400, Selexsorb® Si, SRU

Revision date: 10/28/05

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NFPA Classification:**Health:** 0
Flammability: 0
Instability: 1
Special Hazards:**HMIS Classification:****Health:** 1
Flammability: 0
Physical Hazard: 1
Personal Protection: B**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****Chemical Name:** Aluminum Oxide, Hydrate**Product Use:** Adsorbent. Drying agent. Industrial catalyst. Catalyst intermediate.**Supplier:** ENGELHARD CORPORATION
3502 RIVERVIEW DRIVE
PORT ALLEN, LA 70767
1-225-389-9945ENGELHARD CORPORATION
109 HIGHWAY 131
VIDALIA, LA 71373
1-318-336-9601 (x26 for Customer Service)For Chemical Emergency Call CHEMTREC (24 hours):
1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)
1-703-527-3887 (Outside Above Area)**2. COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient CAS Number	Weight in Percent (%)	Notes
Aluminum Oxide, Hydrate 1333-84-2	94-100	None.

Other Information:

NOTE: The percentage by weight values reported for this product represent approximate formulation values.

3. HAZARDS IDENTIFICATION**Emergency Overview:**

Color: Off-white
Form: Powder, balls, granules or pellets.
Odor: Odorless
Flash Point, °C: Nonflammable

Most Important Hazards: May cause skin irritation. Inhalation may result in respiratory irritation.

Potential Health Effects:

Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract. Exposure to high concentrations may cause coughing and difficulty breathing.

Ingestion: No adverse health effects are expected from swallowing.

Skin Contact: May cause skin irritation. May cause dermatitis.

Eye Contact: Large amounts of dust may cause mechanical irritation.

Carcinogenicity:

Ingredient CAS Number	Weight in Percent (%)	NTP (Y/N)	IARC (See Notes)	OSHA (Y/N)	ACGIH (See Notes)
Aluminum Oxide, Hydrate 1333-84-2	94-100	N	N	N	A4

Notes:
IARC: Y1=Carcinogenic to humans; Y2A=Probably carcinogenic to humans; Y2B=Possibly carcinogenic to humans; N3=Not classifiable as to its carcinogenicity; N=Not studied or probably not carcinogenic.
ACGIH: A1=Confirmed human carcinogen; A2=Suspected human carcinogen; A3=Confirmed animal carcinogen; A4=Not classifiable as a human carcinogen; A5=Not suspected as a human carcinogen; N=Not studied.

Chronic Health Hazards: Prolonged or repeated exposure to dust may cause pulmonary problems.

Aggravated Medical Conditions: Pulmonary disorders. Dermal ailments.

4. FIRST AID MEASURES

Inhalation: Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

Ingestion: Not a hazard under normal use conditions. If large quantities are ingested, seek medical advice.

Skin Contact: Wash with soap and water. Get medical attention if irritation persists.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point, °C: Nonflammable
Autoignition Temperature, °C: Nonflammable
Lower Explosive Limit, %: Not Determined
Upper Explosive Limit, %: Not Determined

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Fire Fighting Procedures: Positive pressure, self-contained breathing apparatus. Wear full protective clothing.

Unusual Fire and Explosion Hazards: Not a fire or explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Contain spillage. Scoop up or vacuum into a container for reclamation or disposal. Avoid dusting.

7. HANDLING AND STORAGE

- Keep container closed.
- Store in cool dry place.
- Avoid generating or breathing dust.
- Avoid contact with eyes, skin and clothing.
- Use with adequate ventilation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient CAS Number	Weight in Percent (%)	OSHA PEL	ACGIH TLV
Aluminum Oxide, Hydrate 1333-84-2	94-100	15 mg/m ³ (Total dust) 5 mg/m ³ (Respirable dust)	10 mg/m ³ (as Al, dust)

Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 2005 standards. Unless otherwise noted, all OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, June 30, 1993.

Personal Protective Equipment: Safety glasses with side shields. Wear suitable gloves.

Respiratory Protection: If respiratory protection is used, follow all requirements for respiratory programs set forth in OSHA regulations (29 CFR 1910.134). Use approved respiratory protection if exposure limits are exceeded, or overexposure is likely.

Ventilation: General ventilation. Local exhaust ventilation is recommended to control exposures to within applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Powder, balls, granules or pellets.

Color: Off-white

Odor: Odorless

Melting Point, °C: 2050

Bulk Density: 620-830 kg/m³

Solubility (in water): Insoluble

pH: 9.4-10.1

10. STABILITY AND REACTIVITY

Stability Data: Stable
Conditions/Hazards to Avoid: None anticipated
Incompatibility (Materials to Avoid): Contact with water may produce significant amounts of heat.
Hazardous Decomposition Products: None anticipated
Polymerization: None anticipated.
Polymerization - Avoid: None anticipated.

11. TOXICOLOGICAL INFORMATION

Information on Product:

No data available.

Information on Components:

Ingredient CAS Number	Weight in Percent (%)	Acute Toxicity - Oral	Acute Toxicity - Inhalation	Acute Toxicity - Dermal	Acute Toxicity - Other
Aluminum Oxide, Hydrate 1333-84-2	94-100	Not Available	Not Available	Not Available	Not Available

12. ECOLOGICAL INFORMATION

Information on Product:

Environmental Fate: No data available.
Ecotoxicological Information: No data available.

13. DISPOSAL CONSIDERATIONS

US EPA Waste Number: Not Regulated

Disposal of Waste Method: Local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

14. TRANSPORT INFORMATION

International Transport Regulations:

ICAO Class: Not Regulated

IMO Class: Not Regulated

US Transportation Regulations:

DOT Classification: Not Regulated

Canadian Transportation of Dangerous Goods (TDG):

TDG Classification: Not Regulated

15. REGULATORY INFORMATION

International Inventories:

United States: This product or its ingredients are listed on or compliant with the TSCA Inventory.
Canada: This product or its ingredients are listed on or compliant with the DSL.
Europe: This product or its ingredients are listed on or compliant with EINECS.
Japan: This product or its ingredients are listed on or compliant with MITI.
Australia: This product or its ingredients are listed on or compliant with AICS.
Korea: Not Determined
Philippines: This product or its ingredients are listed on or compliant with PICCS.
China: This product or its ingredients are listed on or compliant with the IECSC.

US Federal Regulations:

Ingredient CAS Number	Weight in Percent (%)	Subject to SARA 313 Reporting
Aluminum Oxide, Hydrate 1333-84-2	94-100	No

SARA 311/ 312 Hazard Categories:

Acute Health Hazard

CAA 602 Ozone Depleting Substances (ODS):

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

US State Regulations:

VOC Content (CARB): Not Determined

Canadian Regulations:

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations* .
Class D Division 2 Subdivision B

16. OTHER INFORMATION

Revision number: 1

Prepared By: Engelhard Corporate Environmental Health & Safety Group

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and for persons working with or handling this product. The information presented in the MSDS is premised upon proper handling and anticipated uses, and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact the supplier at the phone number listed in Section 1 to make certain that this sheet is current. Copyright Engelhard Corporation. License granted to make unlimited copies for internal use only. End of MSDS...