MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Alumina<br>Product Number: 400 Series<br>Product Category: Catalyst<br>Order Code: 300 Series<br>Company Name: Alcoa<br>Address: 300 Scott Way, Green Bay, WI 54304<br>Contact Person: Jim Klahn<br>Phone: (800) 555-5566, 724-6490, 724-7034<br>Email: jim.klahn@alcoa.com<br>

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components: Alumina<br>
Activator: Vapour Suppressant

SECTION 3. HAZARDS IDENTIFICATION

Hazard Class: None

Hazard Statement: May cause irritation. Exposed skin contact may aggravate an existing dermatitis (skin condition) and/or sensitivity of the skin. Inhalation: Exposure to dust with exceeding the PEL (see Section 8) may cause irritation of the eyes, nasal passages, and respiratory system. Inhalation: Remove to fresh air. If breathing difficulty, give artificial respiration. If breathing is difficult, give

Section 4. FIRST AID MEASURES

Inhalation: Fresh air. Remove to fresh air. If breathing difficulty, give artificial respiration. If breathing is difficult, give

Section 5. TREATMENT OF EXPOSURE

If exposed, seek medical attention. Wash affected area with plenty of soap and water for several minutes. If skin irritation develops or persists, seek medical attention.

Section 6. STABILITY AND REACTIVITY

Stability: Stable. Do not mix with incompatible materials. Compatibility at normal use temperatures is recommended. Incompatible materials can cause chemical or physical changes in the product, making it unsafe for use. Contact with incompatible materials may result in deterioration of the product's performance characteristics.

Section 7. FIRE FIGHTING MEASURES

Extinguishing Media: CO2, foam, water spray. Avoid breathing the smoke and contact with skin and eyes. Use water spray to cool the containers and protect from contact with incompatible materials.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use of a range hood or local exhaust ventilation is recommended. Eye Protection: Use safety goggles. Skin Protection: Use gloves and protective clothing. Protective Equipment: Use appropriate personal protective equipment as specified in the MSDS.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES


Section 10. STORAGEN/STABILITY AND RECOMMENDATIONS FOR SAFE HANDLING

Storage: Store in a cool, dry, well-ventilated area. Keep away from incompatible materials. Moisture sensitivity: Not applicable. Handle with care to prevent contamination. Avoid direct sunlight and exposure to heat. Keep the product away from incompatible materials. Incompatible Materials: Avoid contact with incompatible materials. Use appropriate personal protective equipment as specified in the MSDS.

Section 11. TOXICOLOGICAL INFORMATION

Toxicological Properties: Alumina is considered to be a low risk material. It is not considered to be a respiratory sensitiser. It is not known to be mutagenic or carcinogenic.

Section 12. ECOTOXICOLOGICAL INFORMATION

Ecotoxicity: Alumina is not considered to be toxic to aquatic life. It is not listed as a hazardous waste according to the U.S. Environmental Protection Agency's (EPA) hazardous waste regulations.

Section 13. DISPOSAL CONSIDERATIONS

Correct Disposal Method: Alumina should be disposed of in accordance with local, state, and federal regulations. Follow all applicable disposal guidelines to ensure safe and proper disposal. Contact local authorities or hazardous waste facilities for proper disposal methods and regulations.

Section 14. TRANSPORT INFORMATION

Transportation Regulations: Alumina is not regulated as a hazardous material under the U.S. Department of Transportation's (DOT) hazardous materials transportation regulations. Check with local, state, and federal regulations for specific transportation requirements.

Section 15. REGULATORY INFORMATION

Regulatory Notes: This MSDS complies with the requirements of OSHA's Hazard Communication Standard (29 CFR 1910.1200). This product is not listed in the U.S. EPA's Toxic Substances Control Act (TSCA) Inventory.

Section 16. ADDITIONAL INFORMATION

Additional Information: This MSDS is intended for use as a reference for proper handling and disposal of this product. For more information, please contact Alcoa at (800) 555-5566, 724-6490, 724-7034. This product is not listed in the U.S. EPA's Toxic Substances Control Act (TSCA) Inventory.
Section 5. Fire Fighting Measures
- Flash Point: NA
- Flammable Limits: NA
- Auto-Ignition Temperature: 500 °F
- Extinguishing Media: Water spray, dry chemical, foam, or carbon dioxide can be used. Use water fog or spray to cool exposed equipment and container.
- Special Fire Fighting Procedures: For large fires or fires in confined areas, full emergency equipment with self-contained breathing apparatus and full protective clothing should be used. Thermal decomposition of this product may produce carbon monoxide gas.

Section 6. Accidental Release Measures
- Avoid generating or breathing airborne dust. If unused material is spilled, collect by sweeping, shoveling or vacuuming and recycle the material for use. If this product is mixed with other materials, see Section 15.

Section 7. Handling and Storage
- Store in a cool, dry, and well-ventilated area. Avoid conditions described in Section 10.

Section 8. Exposure Controls/Personal Protection
- Exposure Limits: None specifically established for this product; treat as a nuisance dust as defined in 29 CFR 1910.1000.
  OSHA PEL: Total Dust is 15 mg/M³, Respirable Fraction is 5 mg/M³.
  ACGIH TLV is 10 mg/M³.
- The end-user must determine the specific types of personal protective equipment needed according to 29 CFR 1910.132—Personal Protective Equipment (PPE) for General Industry. The following are only suggestions:
  - Eyes: Safety glasses or goggles
  - Skin: Suitable chemically resistant gloves and protective clothing
  - Inhalation: Air purifying respirator with appropriate chemical cartridge or canister
- Adequate ventilation should be provided to limit the threat of inhalation.

Section 9. Physical and Chemical Properties
- Appearance: Black, irregular, dry granular solid
- Odor: Odorless
- Boiling Point: NA
- Vapor Pressure (mmHg): NA
- Vapor Density: NA
- Solubility in Water: Insoluble
- Specific Gravity (H₂O=1): 1.9-2.2
- Melting Point: NA
- pH: NA
- Evaporation Rate (Butyl Acetate=1): NA
- % Vaporizable by volume (%H₂O=100%): NA

Section 10. Stability and Reactivity
- Stable: Yes

Conditions to Avoid: Contact with strong oxidizers, such as ozone, liquid oxygen, chlorine, permanganate, and ketones may result in fire.

Section 11. Toxicological Information
- This product is not listed by NTP or IARC. See Section 15.

Section 12. Ecological Information
- No data available. See Section 15.

Section 13. Disposal Considerations
- This product in itself is considered to be non-hazardous as defined by RCRA (40 CFR 261). Once used, this product may take on the characteristics of the chemical(s) it was used with and should be disposed of accordingly. Disposal of this product (used or unused) must be in compliance with all local, state, and federal regulations.

Section 14. Transport Information
- This product is not a DOT Hazardous Material and is not regulated for all shipping purposes.

Section 15. Regulatory Information
- This product is considered to be non-hazardous by the Office of Hazardous Materials Management (49 CFR 172.101 and 173.124).
- TSCA Inventory Status: All components are listed on the TSCA list.
- SARA Title III
  - Section 302 Extreme Hazardous Substance List: Not listed
  - Section 311/312 Hazard Classification:
    - Immediate (acute): No
    - Delayed (chronic): No
    - Fire: No
    - Sudden Release of Pressure: No
    - Reactive: No
- Section 313 Toxic Chemicals: Not listed
- USEPA CERCLA—Reportable Quantity (RQ): Not listed
- RCRA Hazardous Waste: Not listed
- State/Municipal Right-to-Know Regulations: Not listed

Section 16. Other Information
- Abbreviations:
  - CFR: Code of Federal Regulations
  - OSHA: Occupational Safety and Health Administration
  - MSDS: Material Safety Data Sheet
  - PEL: Permissible Exposure Limit
  - NA: Not Applicable
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - TLV: Threshold Limit Value
  - NTP: National Toxicology Program
MATERIAL SAFETY DATA SHEET

SPILFYTER® Products
Mercury Vapor Supressor

Abbreviations (cont.):
- TSCA: Toxic Substances Control Act
- SARA: Superfund Amendments and Reauthorization Act
- USEPA: United States Environmental Protection Agency
- CERCLA: Comprehensive, Response, Compensation, and Liability Act
- DOT: Department of Transportation
- NFPA: National Fire Protection Association
- HIMS: Hazardous Material Information System

NFPA Ratings:
- Health: 1
- Fire: 1
- Reactivity: 0
- Special Hazard: None

HIMS Ratings:
- Health: 1
- Flammability: 1
- Reactivity: 0
- Personal Protection: X

NOTE: This MSDS has been prepared only for the Mercury Vapor Supressor (4610 Series) of SPILFYTER® Products. The MSDS's of the chemicals used with this product must be reviewed completely, and precautions taken as described.

The information accumulated herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, NPS Corporation cannot give guarantees regarding the information from sources, and expressly does not make any warranties, nor assures any liability for its uses of this product.

Disclaimer
You have purchased SPILFYTER® products from NPS Corporation
You have been provided data, product labels, MSDS's, and other information about SPILFYTER® Products.

Some SPILFYTER® Products are hazardous. Information about SPILFYTER® Products that are hazardous is furnished without guarantee. NPS Corporation does not guarantee the accuracy of the information about hazardous SPILFYTER® Products.

Those products are only to be used by people having expertise in using the hazardous products.

The information provided about the hazardous products is believed to be correct. You must perform your investigation as to the safety, toxicity, suitability, and proper shipping method for any hazardous SPILFYTER® Product.

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