



MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Identification

Product Name: Alumina A Bulk SPE Sorbent
Agilent Part Number: 189-2102
Date of Original: 09/12/01 Number of Pages: 3
Supplier's Name: AGILENT TECHNOLOGIES INC.
2850 Centerville Road
Wilmington, Delaware 19808
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When Calling From Outside the USA, You May Also Dial Your International Access Code for the USA then 1 then 302 633 8000

Section 2 - Composition/Information on Ingredients

A 25 gram container of acid washed aluminum oxide absorbent [1344-28-1] for gas chromatography columns.

Chemical Families: Inorganic oxide

Chemical Synonyms: Aluminum oxide is also known as alumina; alpha-alumina; and aluminum sesquioxide

Section 3 - Hazards Identification

May cause eye irritation. Do not breathe dust.

Section 4 - First-Aid Measures

Inhalation: Harmful if inhaled. Dust is irritating to the mucous membranes and upper respiratory tract. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. If inhaled, remove to fresh air. If breathing is difficult give oxygen. Contact Physician immediately.

Eye Contact: Dust is irritating to the eyes. Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water by separating the eyelids with fingers. Contact Physician immediately.

Skin Contact: Causes skin irritation. In case of contact, immediately wash skin with soap and copious amounts of water. Remove and wash contaminated clothing promptly.

Ingestion: Harmful if swallowed. If ingested, wash out mouth with water. Call "Poison Control Center" for assistance. Contact Physician immediately.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Appropriate to surroundings

Special Fire Fighting Procedures: Wear full protective clothing and self contained positive pressure breathing apparatus certified by NIOSH when fighting chemically related fires.

Unusual Fire and Explosion Hazards: When exposed to water, material can get quite hot, flooding will reduce temperature to a safe limit.

Section 6 - Accidental Release Measures

Wearing appropriate personal protective equipment, shovel or sweep up using a dust suppresser. Vacuum the remainder of the smaller quantities using a HEPA-type vacuum. Avoid inhaling dust. Place waste in a plastic bag or other suitable container and dispose of as residual waste. This material is not defined as hazardous waste by RCRA (40 CFR Part 261) and may be landfilled according to federal, state and local regulations.

Section 7 - Handling and Storage

Do not breathe dust and avoid contact with skin and eyes. Wash thoroughly after handling. Maintain good housekeeping practices. Avoid creating dust. Keep containers closed. Do not store with incompatible materials. Store in a cool, dry place.

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Section 8 - Exposure Controls/Personal Protection

Ventilation: Adequate ventilation is required to protect personnel from exposure to chemical vapors or dusts exceeding PEL and to minimize fire hazards. See Section 15 for regulatory standards of exposure. **Respiratory:** Use NIOSH approved respirator equipment. See Section 15. **Eyes:** Safety glasses are considered minimum protection. Chemical safety goggles or face shield may be necessary depending on quantity of material and conditions of use. Emergency eye wash fountains should be available in the vicinity of any possible exposure. **Skin:** Chemical-resistant protective gloves and clothing are recommended. The choice of protective gloves or clothing must be based on chemical resistance and other user requirements. Generally BUNA-N offers acceptable chemical resistance. Individuals who are acutely and specifically sensitive to this chemical may require additional protective clothing.

Section 9 - Physical and Chemical Properties

Flash Point (Method Used): NA Explosion Potential: LEL (NA)/UEL (NA)
Specific Gravity (H2O = 1): 3.970 Boiling Point (Degree C): 2977
Melting Point (Degree C): 2050 Vapor Pressure (mm Hg at 2158°C): 1
Evaporation Rate (n-butyl acetate =1) NA Octanol/Water Partition Coefficient: NA
Vapor Density (Air =1): NA
Odor Threshold: ND
Solubility in Water: Insoluble (X) /Soluble ()
Appearance and Odor: White powder, no odor

Section 10 - Stability and Reactivity

Stability: Stable (x) / Unstable ()
Conditions to Avoid: Moisture (water) can cause a rise in temperature that may result in a burn
Incompatibility (Materials to Avoid): Water, acids, bases, fluorides
Hazardous Decomposition or Byproducts: NA
Hazardous Polymerization: May Occur () / Will Not Occur (x)

Section 11 - Toxicological Information

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes
Harmful if inhaled or swallowed.
Health Hazard Acute/Chronic: This material is an eye and mucous membrane irritant. Acute exposure causes irritation of eyes, skin, throat and nose.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No OTHER? No
Medical Conditions Generally Aggravated by Exposure: Preclude from exposure to dust those persons with preexisting upper respiratory health problems.

Section 12 - Ecological Information

Persistence/Degradability: ND
Biodegradability: ND
Bioaccumulation: NA

Section 13 - Disposal Considerations

Wastes are not hazardous as defined by RCRA (40 CFR Part 261). This material may be landfilled as a residual waste according to federal, state and local regulations.

Section 14 - Transport Information

DOT Regulations:
Shipping Name: Non-regulated Material
IATA-DGR Regulations:
Shipping Name: Non-regulated Material
RID/ADR: NA ADNR: NA

Section 15 - Regulatory Information

Chemical Name	CAS #	OSHA PEL/TWA	ACGIH TLV/TWA	NIOSH TLV/TWA	Volume
Aluminum Oxide	[1344-28-1]	5 mg/m3 (Respirable fraction) 15 mg/m3 (Total dust)	10 mg/m3 (As Al)	ND	100%

SARA Reporting: Section 302: No Section 304: No Section 313: Yes
OSHA Labeling Requirements: Irritant
TSCA Inventory List: Yes



Section 16 - Other Information

Unless otherwise noted, the above information pertains only for the base material and similar types of components in the sample. When no toxicity data is provided, it is prudent to handle this chemical as hazardous. Furthermore, since individual chemical hypersensitivity cannot be predicted, every chemical should be handled with due respect.

EUROPEAN INFORMATION

HARMFUL

- R 20 Harmful by inhalation
- R 37 Irritating to respiratory system
- S 22 Do not breathe dust
- S 38 In case of insufficient ventilation, wear suitable respiratory equipment
- S 36 Wear suitable protective clothing

ADDITION INFORMATION

- OEL-AUSTRALIA:TWA 10 MG/M3 JAN 1993
- OEL-AUSTRIA: MAK 5 MG/M3, DUST, JAN1999
- OEL-BELGIUM:TWA 10 MG/M3 JAN 1993
- OEL-DENMARK: TWA 10 MG(AL)/M3, JAN1999
- OEL-GERMANY:TWA 6 MG/M3 JAN 1993
- OEL-THE NETHERLANDS:TWA 10 MG/M3 JAN 1993
- OEL-RUSSIA:STEL 4 MG/M3 JAN 1993
- OEL-SWITZERLAND:TWA 6 MG/M3 JAN 1993
- OEL-UNITED KINGDOM:TWA 10 MG/M3;STEL 20 MG/M3 JAN 1993
- OEL-POLAND: MAC(TWA) 2 MG/M3, MAC(STEL) 16 MG/M3, JAN1999
- OEL-SWEDEN: TWA 10 MG(AL)/M3 (TOTAL DUST), JAN1999.
- ORI-SWEDEN: TWA 4 MG(AL)/M3 (RESP. DUST), JAN1999
- OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
- OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

KEY TO ABBREVIATIONS

- ACGIH - American Conference of Governmental Industrial Hygienists
- ADNR - Regulations concerning the carriage of dangerous goods on the Rhine
- CAS - Chemical Abstract Service
- DOT - US. Department of Transportation 49 Code of Federal Regulations
- IARC - International Agency for Research on Cancer
- IATA-DGR - International Air Transport Association- Dangerous Goods Regulation
- LEL - Lower Explosion Limit
- NA - Not Applicable
- ND - No Data
- NIOSH - National Institute for Occupational Safety and Health
- NTP - National Toxicology Program
- OEL -Occupational Exposure Limit
- OSHA - Occupational Safety and Health Administration
- PEL - Permissible Exposure Limit
- RID/ADR - Regulations Concerning the International Carriage of Dangerous Goods by Rail/European Agreement Concerning the International Carriage of Dangerous Goods by Road
- TLV - Threshold Limit Value
- TWA - Time Weighted Average
- UEL - Upper Explosion Limit
- [] - Indicates CAS Number