MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Identification

Product Name: Zorbax SB C18 - chromatography packing
Date Prepared: July 24, 2003
Manufacturer's Name: Agilent Technologies, Inc.
2850 Centerville Road
Wilmington, Delaware 19808
USA Emergency Telephone Number: 1-302-633-8899
USA Information Telephone Number: 1-877-4Agilent
European Information Telephone Number: (7243) 602-2
European Emergency Telephone Number: 0049(0)6151/722440
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 REFER TO TABLE

Zorbax SB-C18 chromatography packing is a reaction product of high purity silica gel [112926-00-8] with diisobutyl-octadecyl silane: \[(\text{SiO}_2)\times(\text{Si(C}_4\text{H}_9)_2(\text{CH}_2)_{17}\text{CH}_3)\] [No CAS Assigned]. Families: Surface modified amorphous silica. Synonyms: Zorbax SB C-18, Zorbax 300 SB C-18, and Poroshell 300 SB C-18.

Section 3 - Hazards Identification

May cause eye irritation. Do not breathe dust.

Section 4 - First-Aid Measures

Inhalation: Symptoms of overexposure may include cough and discomfort. If large amounts are inhaled, move affected person to fresh air. If breathing is difficult give oxygen. If breathing has stopped begin resuscitation measures. Contact physician. Skin Contact: Wash with soap and water. Eye Contact: May be a mild eye irritant. Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water by separating the eyelids with fingers. If redness or discomfort persists, contact a physician. Ingestion: This compound is not likely to be hazardous by ingestion. However, if swallowed, wash out mouth with water provided affected person is conscious. Consult a physician.

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: None

Section 6 - Accidental Release Measures

Wearing appropriate personal protective equipment, 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. Unused material is not defined as hazardous waste by RCRA (40 CFR Part 261) and may be landfilled according to federal, state and local regulations.

DISCLAIMER: This Safety Data Sheet is offered without charge to the clients of Agilent Technologies. Data is the most current available to Agilent Technologies at the time of preparation and is issued as a matter of information only, no warranty as to its accuracy or completeness is expressed or implied.
Section 7 - Handling and Storage
Do not breathe dust and avoid contact with skin and eyes. Wash thoroughly after handling. Maintain good housekeeping practices. Keep containers closed. Do not store with incompatible materials. Store in a cool, dry place.

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
Specific Gravity (H2O = 1): ND
Evaporation Rate (n-butyl acetate =1): NA
Vapor Pressure (mm Hg at 25°C): ND
Odor Threshold: ND
Solubility in Water: Insoluble (X) / Soluble ( )
Appearance and Odor: White, off-white powder. Faint odor.

Section 10 - Stability and Reactivity
Stability: Stable (x) / Unstable ( )
Incompatibility (Materials to Avoid): Reacts with hydrofluoric acid (HF)
Hazardous Decomposition or Byproducts: NA
Hazardous Polymerization: May Occur ( ) / Will Not Occur (x)

Section 11 - Toxicological Information
Route(s) of Entry: Inhalation? Yes  Skin? No  Eyes? Yes  Ingestion? Yes
Health Hazard Acute/Chronic: This product does not contain crystalline silica (CA) that is considered hazardous by inhalation.
Medical Conditions Generally Aggravated by Exposure: Preclude from exposure to dust those persons with preexisting upper respiratory and lung disease such as, but not limited to, bronchitis, emphysema and asthma.

Section 12 - Ecological Information
Persistence/Degradability: Based on chemical experience, will degrade over very long period of time.
Biodegradability: ND
Bioaccumulation: NA

Section 13 - Disposal Considerations
Unused product is not hazardous as defined by RCRA (40 CFR Part 261). Unused material may be landfilled as a residual waste according to federal, state and local regulations.

Section 14 - Transport Information
DOT Regulations: Non-regulated Material
IATA-DGR Regulations: Non-regulated Material
Shipping Name: Non-regulated Material
RID/ADR: NA  ADNR: NA
Section 15 - Regulatory Information (fused silica)

Exposure Limits: There are no established exposure limits for this product. However, if grinding or other means generates dust, the following standard would apply: Particulate matter not otherwise classified: (PNOC).

OSHA PEL:
- 5 mg/m³ (Respirable fraction)
- 15 mg/m³ (Total dust)

ACGIH TWA:
- 3 mg/m³ (Respirable particulate)
- 10 mg/m³ (Inhalable particulate)

SARA Reporting: Section 302: None  Section 304: None  Section 313: None

OSHA Labeling Requirements: None

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 (Silica)

CAUTION: SUBSTANCE NOT YET FULLY TESTED.

HARMFUL
- R 20: Harmful by inhalation.
- R 36/37: Irritating to eyes and respiratory system.
- S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 36: Wear suitable protective clothing.
- S 22: Do not breathe dust.

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  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