

*** MATERIAL SAFETY DATA SHEET ***

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME..... ABLEBOND[®] 8200C Adhesive
 SYNONYM NAME(S)..... Modified Acrylate Resin

Ablestik Laboratories
 Subsidiary of National Starch and Chemical Company
 20021 Susana Road
 Rancho Dominguez, CA 90221
 USA

Emergency telephone numbers:
 For U.S., Canada and the U.S. Virgin Islands: 1 - 800 - 424 - 9300
 (24hours, CHEMTREC)

For calls originating elsewhere: 703-527-3887 (Collect calls are accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS NUMBER</u>	<u>CONCENTRATION RANGE (%)</u>
Acrylate resins	Proprietary	10-30
Polyimide resin	Proprietary	1-5
Treated silica	Proprietary	1-5
Silver	7440-22-4	60-100

3. HAZARDS IDENTIFICATION

Emergency Overview

Gray paste.

Warning! Contains combustible liquid and vapor. May cause skin and severe eye irritation. May cause skin sensitization. Risk of sensitization depends on duration and level of exposure.

EYE..... Irritating, and will injure eye tissue if not removed promptly. Symptoms may include burning sensation, tearing, redness or swelling.

SKIN CONTACT..... Irritating to the skin. May be absorbed through the skin. May cause skin sensitization, a partial or whole-body dermatitic rash experienced after exposure, however minimal. May cause itching, burning and swelling of affected area.

INHALATION..... Irritating and/or toxic vapors may be released at elevated temperatures. Vapors may be irritating to

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INGESTION..... respiratory system and nasal passages.
No specific data are available.

4. FIRST-AID MEASURES

EYE..... Immediately flush eyes with large amounts of water for at least 15 minutes, lifting upper and lower lids. If irritation persists, get medical attention.

SKIN CONTACT..... Flush exposed areas thoroughly with water until all chemical is removed. Remove contaminated clothing and launder before reuse. If irritation persists, get medical attention.

INHALATION..... Remove to fresh air. Get medical attention if irritation persists.

INGESTION..... Get medical attention.

5. FIREFIGHTING MEASURES

AUTOIGNITION..... Not available

FLASH POINT..... Not available

EXTINGUISHING MEDIA..... Foam; CO2; Dry chemical

SPECIAL FIREFIGHTING PROCEDURES.... Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

FIRE & EXPLOSION HAZARDS..... Emits toxic fumes under fire conditions.

UPPER EXPLOSION LIMIT (%)..... Not Available

LOWER EXPLOSION LIMIT (%)..... Not Available

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES..... Scrape up and place in suitably labeled container for disposal.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE..... - 40⁰ C

SPECIAL SENSITIVITY..... Heat

HANDLING/STORAGE..... Empty containers may contain product residue; follow MSDS and label warnings even after they have been

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emptied.

VENTILATION REQUIREMENTS..... Vent curing oven to outdoors.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>COMPONENT</u>	<u>EXPOSURE LIMITS</u>
Silver	OSHA: PEL-TWA; 0.01 mg/m ³ ACGIH: TLV-TWA; 0.1 mg/m ³
Nuisance dust	OSHA: PEL-TWA; total dust . . 10 mg/m ³ Respirable . . 5 mg/m ³ ACGIH: TLV-TWA; total dust . . 10 mg/m ³ Respirable . . 3 mg/m ³
VENTILATION REQUIREMENTS.....	Vent curing oven to outdoors.
EYE PROTECTION REQUIREMENTS.....	Wear safety glasses with side shields.
GLOVE REQUIREMENTS.....	Employee must wear appropriate protective gloves to prevent contact with this substance.
CLOTHING REQUIREMENTS.....	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.
CHANGE/REMOVAL OF CLOTHING.....	If product is spilled on clothes, remove immediately and launder before reuse.
WASH REQUIREMENTS.....	If contact has occurred, wash with soap and water before eating.
RESPIRATOR REQUIREMENTS.....	NIOSH approved respirator if required. Self-contained breathing apparatus in emergency and non-routine situations.

9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE.....	Mixture
PHYSICAL FORM.....	Paste
APPEARANCE/ODOR.....	Gray
ODOR THRESHOLD.....	Not available
PH AS IS.....	Not available
BOILING POINT.....	Not available
MELTING/FREEZING POINT.....	Not available
SOLUBILITY IN WATER.....	Insoluble
PARTITION COEFFICIENT (n-octanol/water).....	Not available
SPECIFIC GRAVITY (WATER=1).....	3.5
BULK DENSITY.....	Not available
EVAPORATION RATE.....	Not available
VAPOR PRESSURE (mmHg).....	Not available
VAPOR DENSITY (air = 1).....	Not available
VISCOSITY.....	Not available
VOLATILES.....	Not available

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VOLATILE ORGANIC COMPOUNDS..... Not available
AUTOIGNITION..... Not available
FLASH POINT..... Not available
OXIDIZING PROPERTIES..... Not available

10. STABILITY AND REACTIVITY

STABILITY..... Stable
MATERIALS TO AVOID..... Oxidizing agents, acids, and
alkaline materials.
HAZARDOUS DECOMPOSITION PRODUCTS... Carbon dioxide, carbon monoxide,
oxides of nitrogen and unknown
organics. Thermal decomposition
products are hazardous and/or toxic.

11. TOXICOLOGICAL INFORMATION

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

ROUTE OF ENTRY..... Skin, Inhalation
EFFECTS OF CHRONIC EXPOSURE..... Repeated exposure may cause skin
sensitization.
This product has not been tested for
mutagenicity. Epoxy resins similar
to those used in this formulation
have been tested and have produced
equivocal mutagenic activity. The
relevance of those findings to
toxicological impact on humans is
unknown.
The toxicological properties of this
product have not been fully evaluated.
Use of good industrial hygiene
practices is required. Avoid direct
contact with skin or eyes. Do not
ingest or inhale.
TARGET ORGANS..... Skin
CARCINOGEN..... No
SENSITIZER..... Yes

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS..... Waste disposal should be in
accordance with existing federal,
state and local environmental

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EMPTY CONTAINER WARNINGS..... regulations.
Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

14. TRANSPORTATION INFORMATION

DOT INFORMATION

DOT SHIPPING NAME..... Not regulated
UN/ID Number..... NA
Class NA
Packaging Group NA
Subsidiary risk NA
Label NA

15. REGULATORY INFORMATION

TSCA..... All components are in compliance with the TSCA requirements.

STATE LAWS..... WARNING: This product contains the following chemical known to the State of California to cause cancer: Acrylonitrile is present in trace amounts.

WARNING: This product contains the following chemical known to the State of California to cause birth defects or other reproductive harm: Toluene is present in trace amounts.

SARA/TITLE III, THIS PRODUCT CONTAINS (OR IS) A TOXIC CHEMICAL FOR ROUTINE ANNUAL CHEMICAL RELEASE REPORTING UNDER SECTION 313:

Silver

The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.

16. OTHER INFORMATION

MSDS DATE..... October 11, '04
CHANGES SINCE PREVIOUS ISSUE..... -

ABLEBOND[®] 8200C Adhesive

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FOR REGULATORY INFORMATION, CONTACT:

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