

MATERIAL SAFETY DATA SHEET

DER 331 DLC[®]-A

Date Revised: November 18, 2011

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: DER 331 DLC-A

CHEMICAL NAME: Bisphenol A/Epichlorohydrin based epoxy resin on Silicon Dioxide

Company:



NATROCHEM, INC.
P.O. Box 1205
Savannah, GA 31402-1205

HMIS RATING	
HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

Telephone Numbers:

Transportation Emergencies:

CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)

CHEMTREC (International): (202) 483-7616 (24 hours, call collect)

Product Information: (912) 236-4464 (EST, 8:00AM – 4:00PM M-F)

SECTION 2 - COMPONENTS

COMPONENT NAME	CAS#
Bisphenol A/Epichlorohydrin based Epoxy Resin	25068-38-6
Silicon Dioxide	112926-00-8

SECTION 3 - PHYSICAL DATA

Boiling Point: >227°C (>500°F)	Specific Gravity: 1.323 (Calculated)
Vapor Pressure (mm Hg): 0.03 @ 77°C	Percent Volatiles: N/DA
Vapor Density (Air = 1): N/A	Evaporation Rate: N/A
Solubility in Water: Negligible	Odor: faint epoxy
Appearance: Off-white, free flowing powder	

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 249°C (480°F) (PMCC)
FLAMMABLE LIMITS: N/DA
AUTOIGNITION TEMPERATURE: N/DA
EXTINGUISHING MEDIA: Use water fog, foam, dry chemical, or CO₂.

SPECIAL FIRE FIGHTING PROCEDURES: Material will not burn unless preheated. Do not enter confined space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus (SCBA). Cool fire exposed containers with water.

UNUSUAL FIRE & EXPLOSION HAZARDS: See Section VII.

SECTION 5 - HEALTH HAZARD DATA

CHRONIC HEALTH EFFECTS: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed for an average of 18 years. No adverse effects were noted in complete medical examination (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree or duration of dust exposure. Laboratory studies have also been conducted in small animals via inhalation to levels of precipitated silica dust of up to 126 mg/m³ for periods from six months to two years. Although precipitated silica was temporarily deposited in the animals lungs, most of the deposited material was cleared soon after the dust exposure ended. The results of all studies performed by, or known to, PPG indicate a very low order of pulmonary activity for synthetic precipitated silica.

ACUTE TOXICITY DATA:

Acute Oral LD50	Acute Dermal LD50	Acute Inhalation LC50
11.4 g/kg (rat)	>20 ml/kg (rabbit)	No deaths in saturated air, 8 hr.
15.6 g/kg (mouse)		

PRIMARY ROUTE OF ENTRY- Inhalation.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No IARC: No OSHA: No

EFFECTS OF EXPOSURE-

EYES- Mildly irritating. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils. Contact with product at elevated temperatures can result in thermal burns.

SKIN- Mildly irritating. Based on product testing product may cause skin sensitization. Contact with product at elevated temperatures can result in thermal burns.

INHALATION- Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds.

INGESTION- Base on product testing, product is considered to have a low order of acute oral toxicity.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection. Preexisting skin and eye disorders may be aggravated by exposure to this product. Preexisting skin or lung allergies may increase the chance of developing increased allergy symptoms form exposure to this product.

SECTION 6 - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Immediately rinse with clean water for 15 minutes. Retract eyelids often. Get medical attention. If contact with hot product occurs immediately flush with cool water for 15 minutes. Get medical attention immediately.

SKIN CONTACT: Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops. If contact with hot product occurs immediately flush with cool water for 15 minutes. Carefully remove clothing; if clothing is stuck to a burn area do not pull it off, but cut around it. Cover burn area with a clean material. Get medical attention immediately.

INHALATION: If overcome by exposure, remove victim to fresh air. Provide oxygen if breathing is difficult. Get medical attention.

INGESTION: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical advice.

NOTE TO PHYSICIAN: In general, emesis induction is unnecessary in high viscosity, low volatility products, e.g., neat epoxy resins.

SECTION 7 - REACTIVITY DATA

STABILITY: Stable.

MATERIALS TO AVOID- Avoid alteration of product properties before reuse. Avoid calcining which may result in crystalline formation. Avoid mixing with additives which may alter toxicological properties. Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids, and strong mineral and organic bases/especially primary and secondary aliphatic amines.

CONDITIONS TO AVOID- Avoid high temperature treatment (>800° C). Reaction with some curing agents may produce considerable heat. Run-a-way cure reactions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon when burned, aldehydes, acids, and other organic substances may be formed during combustion or elevated (>500° F) temperature degradation.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 8 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: MINIMIZE SPILL AREA. Vacuum spill material and place in closed plastic bags for disposal.

WASTE DISPOSAL METHOD: In accordance with local, state, and federal regulations.

SECTION 9 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

VENTILATION: Provide explosion proof ventilation as required to control airborne dust levels. The sum total of all ingredients may emit vapors during normal processing. All possible health effects are not known and individual sensitivities will vary. Effective exhaust ventilation should always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation. Ventilation should be adequate to maintain ambient workplace atmosphere below the limits listed in Section V.

PROTECTIVE GLOVES: Impervious gloves to protect against contact with product.

EYE PROTECTION: Safety goggles.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, eye wash station, safety shower.

SECTION 10 - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations.

OTHER PRECAUTIONS: Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse.

SECTION 11 - REGULATORY INFORMATION

TOXIC SUBSTANCE CONTROL ACT (TSCA):

The components of this product are contained on the Inventory of the Toxic Substance Control Act.

CHEMICAL INVENTORIES:

OSHA:

The component(s) listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

INGREDIENT	AMOUNT	ACGIH (TLV)	OSHA (PEL)	UNITS
Silicon Dioxide	28%	10	6	mg/m3

SARA 313 TOXIC CHEMICALS:

This product contains no toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and the Pollution Prevention Act of 1990.

This information must be included in all MSDS' that are copied and distributed for this material.

SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372

Percent in Product

28%

72%

ADDITIONAL RIGHT-TO-KNOW INFORMATION ON COMPONENTS:

Component	CAS#	Amount	Key
Diglycidyl ether	2238-07-5	2 ppm	5
Phenyl glycidyl ether	122-60-1	6 ppm	3

Description	Description
Reserved	MA Hazardous Substance List
CA Hazardous Substance List	NJ Hazardous Substance List
CA Proposition 65 List	Canadian WHMIS Ingredient DLS
PA Hazardous Substance List	

TRANSPORTATION INFORMATION:

DOT Shipping Name: Not regulated

DOT Identification Number: Not regulated.

SECTION 12 - OTHER INFORMATION

Revision Note: updated CAS number for silicon dioxide

Prepared by: Craig Moore

N/A = Not applicable N/D = Not determined N/DA = No Data Available N/E = Not established

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