



Resin #1093A

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~~(S)~~ - John Hasman / Manufacturing Engineering

The Dow Chemical Company  
Midland, Michigan 48674

# Material Safety Data Sheet

## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

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24-Hour Emergency Phone Number: 989-636-4400

Product: XUS 43595.00 DEVELOPMENTAL CATION EXCHANGE RESIN

Product Code: 80065

Effective Date: 11/06/01 Date Printed: 12/12/01 MSD: 001158

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Sulfonated copolymer of styrene and divinylbenzene in the sodium form  
Water

CAS# 069011-22-9 20-70%

CAS# 007732-18-5 30-80%

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

\*\*\*\*\*  
 \* Light yellow to brown beads. Odorless to slight odor. \*  
 \* \*  
 \* \*  
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### POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

**EYE:** May cause slight eye irritation. Solid or dust may cause irritation or corneal injury due to mechanical action.

**SKIN CONTACT:** Essentially nonirritating to skin. Skin absorption is unlikely due to physical properties.

**INGESTION:** Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

**INHALATION:** Vapors are unlikely due to physical properties. No adverse effects are anticipated from inhalation.

**SYSTEMIC & OTHER EFFECTS:** No relevant information found.

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CANCER INFORMATION: No relevant information found.

TERATOLOGY (BIRTH DEFECTS): No relevant information found.

REPRODUCTIVE EFFECTS: No relevant information found.

**4. FIRST AID**

EYES: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected.

SKIN: No emergency medical treatment necessary.

INGESTION: No emergency medical treatment necessary.

INHALATION: No emergency medical treatment necessary.

**5. FIRE FIGHTING MEASURES**

FLASH POINT: Not applicable

METHOD USED: Not applicable

**FLAMMABLE LIMITS**

LFL: Not applicable

UFL: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to sulfur oxides, organic sulfonates, hydrocarbons, carbon monoxide, carbon dioxide and benzene compounds.

OTHER FLAMMABILITY INFORMATION: This material will not burn until the water has evaporated. Residue can burn.

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical.

FIRE-FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire.

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fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

**6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)****PROTECT PEOPLE:** Pellets or beads may present a slipping hazard.**PROTECT THE ENVIRONMENT:** Material is heavier than water and has limited water solubility. It will collect on the lowest surface.**CLEANUP:** Sweep up.**7. HANDLING AND STORAGE****HANDLING:** See Section 8, Exposure Controls/Personal Protection.**STORAGE:** Store between 35-80F (2-27C).**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****ENGINEERING CONTROLS:** Good general ventilation should be sufficient for most conditions.**PERSONAL PROTECTIVE EQUIPMENT****EYE/FACE PROTECTION:** Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles.**SKIN PROTECTION:** No precautions other than clean body-covering clothing should be needed.**RESPIRATORY PROTECTION:** No respiratory protection should be needed.**EXPOSURE GUIDELINE:** None established.**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE:** Light yellow to brown solid beads**ODOR:** Odorless to slight**VAPOR PRESSURE:** Not applicable**VAPOR DENSITY:** Not applicable

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BOILING POINT: Not applicable  
SOLUBILITY IN WATER: Insoluble  
SPECIFIC GRAVITY: Density 53 lb/ft<sup>3</sup>

**10. STABILITY AND REACTIVITY**

STABILITY AND REACTIVITY: Stable under recommended storage conditions. See Storage, Section 7.

CONDITIONS TO AVOID: Product can decompose at elevated temperatures.

INCOMPATIBILITY MATERIALS: Avoid contact with oxidizing materials. Oxidizing agents such as nitric acid attack organic exchange resins under certain conditions. Before using strong oxidizing agents, consult sources knowledgeable in handling such materials. The severity of the reaction with oxidizing materials can vary from slight degradation to an explosive reaction.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and are not limited to aromatic compounds, hydrocarbons, organic sulfonates and sulfur oxides.

HAZARDOUS POLYMERIZATION: Will not occur.

**11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)**

INGESTION: The oral LD50 for rats is >5000 mg/kg.

MUTAGENICITY: No relevant information found.

**12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)****ENVIRONMENTAL FATE**

MOVEMENT & PARTITIONING: No bioconcentration of the polymeric component is expected because of its high molecular weight. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

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**DEGRADATION & PERSISTENCE:** Based largely or completely on information for polymeric component. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

**ECOTOXICITY:** Not expected to be acutely toxic, but pellets may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

**13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)**

**DISPOSAL:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device, landfill.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

**14. TRANSPORT INFORMATION**

**DEPARTMENT OF TRANSPORTATION (D.O.T.):** For D.O.T. regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

**CANADIAN TDG INFORMATION:** For TDG regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

**15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)**

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## M A T E R I A L   S A F E T Y   D A T A   S H E E T

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NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

**U.S. REGULATIONS**  
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SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

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SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

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**TOXIC SUBSTANCES CONTROL ACT (TSCA):**

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

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STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey  
Pennsylvania

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**OSHA HAZARD COMMUNICATION STANDARD:**

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## REGULATORY INFORMATION (CONTINUED)

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CANADIAN REGULATIONS**  
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WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This product is not a "Controlled Product" under WHMIS.

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## CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

## 16. OTHER INFORMATION

MSDS STATUS: Revised to 16 Sections.

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The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult The Dow Chemical Company For Further Information.