

MATERIAL SAFETY DATA SHEET  
DEXCO POLYMERS  
A Dow/ExxonMobil Partnership

PAGE: 1  
DATE PREPARED: MAR 12, 2003  
MSDS NO.: 25423000

VECTOR 4230 STYRENIC BLOCK COPOLYMER

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: VECTOR 4230 STYRENIC BLOCK COPOLYMER

CHEMICAL NAME:

Styrene-Isoprene Block Copolymer

CHEMICAL FAMILY:

Styrene-Isoprene Block Copolymer

PRODUCT DESCRIPTION:

Elastomer; natural color; little to no odor; solid pellet

CONTACT ADDRESS:

DEXCO POLYMERS  
12012 WICKCHESTER, HOUSTON, TX 77079

|    |   |    |
|----|---|----|
| ** | EMERGENCY TELEPHONE NUMBERS: (24 Hours) | ** |
| ** | CHEMTREC (800) 424-9300                 | ** |
| ** | THE DOW CHEMICAL COMPANY (989) 636-4400 | ** |

NON EMERGENCY TELEPHONE NUMBERS : (8am-5pm M-F)  
FOR HEALTH AND SAFETY INFORMATION CALL: (225) 353-1805 (Request Dexco  
Product Steward)  
FOR GENERAL PRODUCT INFORMATION CALL: (281) 754-5800

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse.

This product is not hazardous as defined in 29 CFR1910.1200

SECTION 3 HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE CONTACT:

Particulates may scratch eye surfaces/cause mechanical irritation.

SKIN CONTACT:

No hazard in normal industrial use.

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Exposure to hot material may cause thermal burns.

INHALATION:

Dust may be irritating to eyes and respiratory tract.

INGESTION:

No hazard in normal industrial use.

Minimal toxicity.

CHRONIC EFFECTS

This product contains talc. In rats exposed to high concentrations of fine particles (mass median diameter around 3 um) of talc (6 and 18 mg/m3) for a lifetime, lung inflammation and fibrosis (male and female) and lung tumors (female) were observed. Male and female mice exposed to similar concentrations produced only inflammation. However, no lung tumors were observed in either male or female mice. These effects were likely due to overloading of the normal respiratory clearance mechanisms. Due to physiological differences, rats may be more susceptible to particle clearance overload than mice. An increase in adrenal tumors was observed in both male and female rats. However, due to high spontaneous incidence of these tumors in control animals, the human health relevance of these tumors is questionable.

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SECTION 4 FIRST AID MEASURES  
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EYE CONTACT:

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water; use soap if available.  
For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

First aid is normally not required.

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SECTION 5 FIRE-FIGHTING MEASURES

FLASH POINT: NOTE: Not required for a solid.

FLAMMABLE LIMITS: LEL: 1.3 UEL: 8.0

AUTOIGNITION TEMP.: NOTE: Not Available

GENERAL HAZARD

Low hazard.

If thermally decomposed, flammable/toxic gases may be released.

Product can accumulate electrostatic charges when rubbed, chafed, or abraded. Static discharge in the presence of volatile or flammable mixtures presents a potential fire or explosion hazard.

Under fire conditions, polymers decompose. Fire is accompanied by the evolution of a dense black smoke with an acrid odor. It may cause watery eyes (lacrimation). The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds.

Compounding of product in high shear equipment can cause the temperature to rise.

Avoid temperatures above 230 C (446 F).

Product contains residual unsaturation which can undergo exothermic oxidative degradation. Accumulation of product in areas exposed to elevated temperatures for extended periods in air may result in self-heating and autoignition.

Cool material before storing or disposing. Storage or disposal without proper cooling may result in autoignition.

The following conditions may cause heat build up, possibly resulting in ignition: an insulated situation (that prevents heat loss), extended time, air exposure and high surface to weight ratios, accumulation of hot polymer patties.

Flammable vapors can be released at elevated temperatures.

This polymer contains low levels of residual solvent which, when stored in closed containers or heated, can form flammable mixtures above the material. Vessels which are used to heat the material should be purged or blanketed with an inert gas to maintain the volatiles level outside the residual solvent flammability range of 1.3 - 8.0 %.

Mechanical handling can cause formation of dusts. To reduce the

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potential for dust explosion, do not permit dust to accumulate.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel.

Isolate "fuel" supply to fire.

Use water, carbon dioxide or dry chemical to extinguish fire.

Cool surrounding area with water to localize fire zone. Soak thoroughly with water to cool and prevent reignition.

Respiratory and eye protection required for fire fighting personnel.

A self-contained breathing apparatus (SCBA) is recommended for indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA is optional. If protective equipment is not available or not used, fight fires from a protected location of safe distance.

Keep people away. Isolate fire area and deny unnecessary entry.

See Section 3 HAZARDS IDENTIFICATION, Section 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION and Section 10 STABILITY AND REACTIVITY.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, Carbon Dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO)

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SECTION 6 ACCIDENTAL RELEASE MEASURES

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LAND SPILL

Spilled pellets present a slipping hazard on hard surfaces.

Recover spilled material and place in suitable containers for recycle or disposal.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Recover the spilled material and place in suitable containers for recycle or disposal.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

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SECTION 7 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:

Yes, use proper bonding and/or grounding procedure.

STORAGE TEMPERATURE, Deg F:

Below 200 F/ 93 C

LOADING/UNLOADING TEMPERATURE, Deg F:

Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

LOADING/UNLOADING VISCOSITY, cSt:

Not Applicable

STORAGE AND HANDLING:

Keep containers closed. Handle containers with care. Store in a cool, well-ventilated place away from incompatible materials.

Do NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight.

Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

Mechanical handling equipment can cause formation of dusts. Maintain good housekeeping. Layers of flammable dusts should not be permitted to accumulate.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS

- o Local exhaust ventilation of process equipment may be needed to control exposures to below the recommended threshold exposure limit. See personal protection recommendations.

PERSONAL PROTECTION

For open systems where contact is likely, wear safety glasses with side shields.

Where contact may occur with hot materials, wear thermal resistant gloves, arm protection and a face shield.

Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent

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overexposure by inhalation.

WORKPLACE EXPOSURE GUIDELINES

OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:

A TWA of 20 mppcf (million particles per cubic foot) for Talc (non asbestos form).

The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity.

Although the 1989 levels have since been vacated by the 11th Circuit Court of Appeals, ExxonMobil Chemical Company recommends that the lower exposure levels be observed as reasonable worker protection.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

A TWA of 2 mg/m3 (respirable dust) for talc that does not contain asbestos fibers, with an A4 designation.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES  
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|                                       |                        |
|---------------------------------------|------------------------|
| SPECIFIC GRAVITY at Deg F:            | < 1                    |
| DENSITY at Deg F:                     | lbs/gal Not Applicable |
| VAPOR PRESSURE, mmHg at Deg F:        | < Negligible           |
| SOLUBILITY IN WATER, wt. % at Deg F:  | Insoluble              |
| VISCOSITY OF LIQUID, cSt at Deg F:    | Not Applicable         |
| SP. GRAV. OF VAPOR, at 1 atm (Air=1): | Not Applicable         |
| FREEZING/MELTING POINT, Deg F:        | Not Applicable         |
| EVAPORATION RATE, n-Bu Acetate=1:     | Not Applicable         |
| BOILING POINT, Deg F:                 | Not Applicable         |

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SECTION 10 STABILITY AND REACTIVITY  
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STABILITY:

Stable

CONDITIONS TO AVOID INSTABILITY:

Do not store above 200 deg F/93 deg C

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION:

Not applicable

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MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Avoid contact with strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:

Flammable Hydrocarbons

Hazardous decomposition product depend upon temperature, air supply and the presence of other materials. Processing may release fumes which may include polymer fragments and other decomposition products. Fumes can be irritating. At temperatures exceeding melt temperatures, polymer fragments can occur.

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SECTION 11 TOXICOLOGICAL INFORMATION  
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Please refer to Section 3 for available information on potential health effects.

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SECTION 12 ECOLOGICAL INFORMATION  
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No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

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SECTION 13 DISPOSAL CONSIDERATIONS  
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Please refer to Sections 5, 6 and 15 for disposal and regulatory information.

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SECTION 14 TRANSPORT INFORMATION  
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DEPARTMENT OF TRANSPORTATION (DOT):

This product is not DOT regulated.

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SECTION 15 REGULATORY INFORMATION  
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TSCA:

Components of this product are listed on the TSCA Inventory.

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CERCLA:\*

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:

Not Hazardous.

This product does not contain Section 313 Reportable Ingredients.

SECTION 16 OTHER INFORMATION

NOTES:

The composition of this product is listed below:

| Component                        | CAS#        | Amount |
|----------------------------------|-------------|--------|
| -----                            | ----        | -----  |
| Styrene-Isoprene Block Copolymer | 25038-32-8  | >98%   |
| Talc (nonfibrous)                | 14807-96-6  | <1%    |
| Additives                        | Proprietary | <1%    |

The Dow Chemical Company recommends the following Industrial Hygiene Limit (IHG):

A TWA of 0.5 mg/m3 (respirable dust) for talc

\*

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned.

| CHEMICAL NAME | CAS NUMBER  | LIST     |
|---------------|-------------|----------|
| -----         | -----       | -----    |
| CYCLOHEXANE   | 000110-82-7 | NJ1      |
| TALC          | 014807-96-6 | NJ3, PA1 |

NJ1= New Jersey Special Health Hazard Substance (present at > or equal

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to 0.1%.

NJ3= New Jersey workplace Hazardous Substance (present at > or equal to 1.0%.)

PA1= Pennsylvania Hazardous Substance (present at > or equal to 1.0%)

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HAZARD RATING SYSTEMS:

This information is for people trained in:  
National Paint & Coatings Association's (NPCA)  
Hazardous Materials Identification System (HMIS)  
National Fire Protection Association (NFPA 704)  
Identification of the Fire Hazards of Materials

|              | NPCA-HMIS | NFPA 704 | KEY          |
|--------------|-----------|----------|--------------|
| HEALTH       | 0         | 0        | 4 = Severe   |
| FLAMMABILITY | 2         | 2        | 3 = Serious  |
| REACTIVITY   | 0         | 0        | 2 = Moderate |
|              |           |          | 1 = Slight   |
|              |           |          | 0 = Minimal  |

CAUTION: HMIS ratings are based on a 0-4 rating scale with 1 representing minimal hazards or risks, and 4 representing significant hazards or risks. Recommended HMIS ratings should not be used in the absence of a fully implemented HMIS hazard communication program.

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REVISION SUMMARY:

Since February 8, 2003 this MSDS has been revised in Section(s):  
14

REFERENCE NUMBER:

HDHA-X-00002

SUPERSEDES ISSUE DATE:

February 8, 2003

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

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