DEXCO POLYMERS LP
a Dow/ExxonMobil Venture

Material Safety Data Sheet
Dexco Polymers LP

Product Name: VECTOR* 8508A Styrenic Block Copolymer

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Dexco Polymers LP encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
VECTOR* 8508A Styrenic Block Copolymer

COMPANY IDENTIFICATION
Dexco Polymers LP
12012 Wickchester Lane
Suite 280
Houston, TX 77079
USA

Customer Information Number: 877-251-0580

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4000
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview
Color: White to off-white
Physical State: Pellets
Odor: Odorless to mild
Hazards of product:

Slipping hazard. Avoid temperatures above 250°C (482°F)

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

Potential Health Effects
Eye Contact: Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.
Skin Contact: Prolonged contact is essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Skin Absorption: No adverse effects anticipated by skin absorption.
Inhalation: Dust may cause irritation to upper respiratory tract (nose and throat). Vapors/fumes released during thermal processing may cause respiratory irritation.
Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
Effects of Repeated Exposure: Repeated inhalation exposure may cause respiratory irritation and lung effects/injury. Impaired lung function and abnormal chest x-rays have been observed in humans repeatedly exposed to high levels of talc dust.
Cancer Information: Rats exposed for their lifetimes to very fine talc particles showed lung inflammation and fibrosis (both sexes) and lung tumors (females only). These effects are believed to be due primarily to overloading the normal respiratory clearance mechanism. Rats may be particularly susceptible to particle clearance overload, resulting in lung injury and tumors. An increase in spontaneously occurring adrenal tumors observed in male rats is of questionable relevance. No increases in tumors were observed in male or female mice.

3. Composition Information

Component	CAS #	Amount
Styrene, 1,3-butadiene copolymer	9003-55-8	>= 97.0 %
Talc	14807-96-6	<= 1.0 %

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin Contact: If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
Unusual Fire and Explosion Hazards: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Styrene.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When heated, flammable mixtures can form above the material especially in closed vessels. Purge or inert vessels which are used to heat the material in order to avoid flammable mixture formation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Store in accordance with good manufacturing practices.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Talc	Dow IHG	TWA Respirable fraction	0.5 mg/m3 The value is for particulate matter containing no asbestos and <1% crystalline silica.
	ACGIH	TWA Respirable fraction.	2 mg/m3 The value is for particulate matter containing no asbestos and <1% crystalline silica.
	Z3	TWA	20 millions of particles per cubic foot of air
	Z3	TWA Respirable.	2.4 millions of particles per cubic foot of air The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.

Z3	TWA Respirable.	0.1 mg/m3 The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.
Z3	TWA Total dust.	0.3 mg/m3 The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.

Personal Protection

Eye/Face Protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present. The following should be effective types of air-purifying respirators: When dust/mist are present use a/an Particulate filter. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Pellets
Color	White to off-white
Odor	Odorless to mild
Flash Point - Closed Cup	Not applicable
Flammable Limits In Air	**Lower**: 1.3 %(V) *Literature* (residual solvent) **Upper**: 8.0 %(V) *Literature* (residual solvent)
Autoignition Temperature	No test data available
Vapor Pressure	Not applicable
Boiling Point (760 mmHg)	Not applicable.
Vapor Density (air = 1)	Not applicable
Specific Gravity (H2O = 1)	< 1 *Literature*
Freezing Point	Not applicable
Melting Point	No test data available
Solubility in Water (by weight)	Negligible
pH	Not applicable

Molecular Weight	> 10000 g/mol *Estimated*
Decomposition Temperature	No test data available
Partition coefficient, n-octanol/water (log Pow)	No data available for this product.
Kinematic Viscosity	Not applicable

10. Stability and Reactivity

Stability/Instability
Stable under recommended storage conditions. See Storage, Section 7. Thermally stable at typical use temperatures.
Conditions to Avoid: Avoid temperatures above 250 °C (482 °F). The following conditions may cause heat buildup, 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. Cool material before storing or disposing. Storage or disposal without proper cooling may result in autoignition. Flammable vapors can be released at elevated temperatures. Avoid static discharge. 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. Avoid direct sunlight.

Incompatible Materials: Avoid contact with oxidizing materials.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

11. Toxicological Information

Acute Toxicity
Ingestion
Single dose oral LD50 has not been determined.
Skin Absorption
The dermal LD50 has not been determined.
Repeated Dose Toxicity
Repeated inhalation exposure may cause respiratory irritation and lung effects/injury. Impaired lung function and abnormal chest x-rays have been observed in humans repeatedly exposed to high levels of talc dust.
Chronic Toxicity and Carcinogenicity
Rats exposed for their lifetimes to very fine talc particles showed lung inflammation and fibrosis (both sexes) and lung tumors (females only). These effects are believed to be due primarily to overloading the normal respiratory clearance mechanism. Rats may be particularly susceptible to particle clearance overload, resulting in lung injury and tumors. An increase in spontaneously occurring adrenal tumors observed in male rats is of questionable relevance. No increases in tumors were observed in male or female mice.
Developmental Toxicity
No relevant information found.
Reproductive Toxicity
No relevant information found.
Genetic Toxicology
No relevant information found.

12. Ecological Information

ENVIRONMENTAL FATE

Movement & Partitioning
No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

Persistence and Degradability
This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY
Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices 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. AS YOUR SUPPLIER, WE HAVE 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: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. Landfill.

14. Transport Information

DOT Non-Bulk
NOT REGULATED

DOT Bulk
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

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

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	No
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Talc	14807-96-6	<= 1.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

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

16. Other Information

Recommended Uses and Restrictions

A polymer -- For industrial conversion as a raw material for manufacture of articles or goods.

Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.

DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Dexco Polymers LP urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided 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 between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.