VECTOR®
STYRENIC BLOCK COPOLYMERS

SAFETY DATA SHEET

1. Identification

Product identifier **VECTOR® 4111S, 4113S, 4114S, 4211S, and 4411S Styrenic Block Copolymers**

Other means of identification

Synonyms VECTOR® is a registered trademark of TSRC Corporation

Recommended use Industrial conversion as a raw material for manufacture of articles or goods.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

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2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information The material may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source).

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Isoprene-Styrene Polymer	25038-32-8	>= 97

Composition comments All concentrations are in percent by weight.

4. First-aid measures

Inhalation If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact Flush skin with large amounts of water. For contact with hot material, immediately immerse affected area of skin in large amounts of cold water to dissipate heat and reduce the extent of thermal burns. Do not peel polymer from the skin.

Eye contact	Flush eyes with water as a precaution. Get medical attention if irritation develops or persists.
Ingestion	Have victim rinse mouth thoroughly with water.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes. Irritation of nose and throat.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	First aid personnel must be aware of own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	None.
Specific hazards arising from the chemical	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Fire fighting equipment/instructions	Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.
General fire hazards	The product is not flammable. Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid inhalation of dust. Avoid inhalation of fumes from molten product. Surfaces may become slippery after spillage. Wear appropriate personal protective equipment. For personal protection, see Section 8 of the SDS.
Methods and materials for containment and cleaning up	Scrape up with shovels into a suitable container for recycle or disposal. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Avoid inhalation of dust and contact with skin and eyes. Avoid contact with hot material. The product may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated place. Keep away from incompatible materials, open flames and high temperatures. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Follow standard monitoring procedures.
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof equipment if high dust/air concentrations are possible.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact with material may occur, safety glasses and face shield are recommended. Wear a face shield when working with molten material.
Skin protection	
Hand protection	When material is heated, wear gloves to protect against thermal burns. Suitable gloves can be recommended by the glove supplier.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In case of inadequate ventilation or when the product is heated, use suitable respiratory equipment with gas filter for organic gas.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Pellets.
Color	Translucent to white.
Odor	Odorless to mild.
Odor threshold	Not available.
pH	Not applicable (material is insoluble in water).
Melting point/freezing point	Property has not been measured.
Initial boiling point and boiling range	Property has not been measured.
Flash point	Not applicable, material is a solid.
Evaporation rate	Not applicable, material is a solid.
Flammability (solid, gas)	Combustible.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	1.3 (for residual solvent)
Explosive limit - upper (%)	8.0 (for residual solvent)
Vapor pressure	Property has not been measured.
Vapor density	Not applicable, material is a solid.
Relative density	Property has not been measured.
Solubility(ies)	
Solubility (water)	< 0.1 % Insoluble in water.
Partition coefficient (n-octanol/water)	Property has not been measured.
Auto-ignition temperature	Not applicable, material is a solid.
Decomposition temperature	Not applicable as the product is not unstable.
Viscosity	Not applicable, material is a solid.
Other information	
Density	Property has not been measured.
Explosive properties	Not explosive.
Kinematic viscosity	Not applicable, material is a solid.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Temperatures above 230 °C.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Molten material will produce thermal burns.
Eye contact	Dust may irritate the eyes.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes and mucous membranes. Irritation of nose and throat.

Information on toxicological effects

Acute toxicity	Dusts may irritate the respiratory tract, skin and eyes.
Skin corrosion/irritation	Contact with molten material may cause thermal burns.
Serious eye damage/eye irritation	May cause irritation through mechanical abrasion.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulative potential	No data available for this product.
Mobility in soil	The product is insoluble in water.
Other adverse effects	Not known.

13. Disposal considerations

Disposal instructions	Dispose of in accordance with local regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. However, this product is a solid. When transported in bulk, it is not covered under Appendix I of the IMSBC Code.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated “active”.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

16. Other information, including date of preparation or last revision

Issue date	02-August-2021
Revision date	05-September-2024
Version #	02
HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0

NFPA ratings

List of abbreviations -

References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
NLM: Hazardous Substances Data Base

Disclaimer

Limited warranty
There are no warranties which extend beyond the product description herein, and seller makes no warranty, express or implied, of fitness for particular use, merchantability or otherwise with respect to product, whether used singly or in combination with other substances or in any process, except that product sold hereunder shall conform to seller's standard sales specifications as of the date of the shipment. Without limiting the foregoing, seller does not recommend or endorse the use of product(s) in any medical application and specifically disclaims any representation or warranty, express or implied, of suitability or fitness for use or otherwise, with respect to product(s)' use in any medical application. Buyer represents and warrants that no product(s) purchased hereunder will be used in or resold into any commercial or developmental manner in connection with medical applications without seller's prior express written acknowledgement, further, buyer agrees that it will make no representations, express or implied, to any person to the effect that seller recommends or endorses the use of product(s) purchased hereunder in any medical application.

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.