

**1. Identification**

**Product identifier** VECTOR 4111N, 4113N, 4114N, 4116N, 4211N and 4213N Styrenic Block Copolymers  
**Other means of identification** None.  
**Recommended use** Industrial conversion as a raw material for manufacture of articles or goods.  
**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer** TSRC (Nantong) Industries Ltd.  
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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)** The material may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source).

**Supplemental information** None.

**3. Composition/information on ingredients****Mixtures**

Chemical name	CAS number	%
Isoprene-Styrene Polymer	25038-32-8	> 98

**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 thoroughly with 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 fumes from molten product. Surfaces may become slippery after spillage. Wear appropriate personal protective equipment.

**Methods and materials for containment and cleaning up** Scrape up with shovels into a suitable container for recycle or disposal.

**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. 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** No exposure standards allocated.

**Appropriate engineering controls** Observe occupational exposure limits and minimize the risk of inhalation of dust and fumes. 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.

#### Skin protection

**Hand protection** When material is heated, wear gloves to protect against thermal burns.

**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.

**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.

<b>Color</b>	White to off-white.
<b>Odor</b>	Odorless to mild.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Combustible.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	< 1
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	< 0.1 % Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	Stable at normal conditions.
<b>Chemical stability</b>	Stable at normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Temperatures above 230 °C.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system.
<b>Skin contact</b>	Molten material will produce thermal burns.
<b>Eye contact</b>	Dust may irritate the eyes.
<b>Ingestion</b>	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

<b>Acute toxicity</b>	Dusts may irritate the respiratory tract, skin and eyes.
<b>Skin corrosion/irritation</b>	Contact with molten material may cause thermal burns.
<b>Serious eye damage/eye irritation</b>	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 regulated.

**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.

**Further information** No other specific acute or chronic health impact noted.

## 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.

**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 of 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 regulated.

**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)** Contains component(s) regulated under the Safe Drinking Water Act.

**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 2016 (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](http://www.P65Warnings.ca.gov).

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

**Issue date** 02-April-2019  
**Revision date** -  
**Version #** 01  
**HMIS® ratings** Health: 1  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**



**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**

The information in the sheet was written based on the best knowledge and experience currently available.