

**1. Identification**

<b>Product identifier</b>	<b>PENNTROWEL VINYL ESTER RESIN (All Colors)</b>	
<b>Other means of identification</b>	None.	
<b>Recommended use</b>	Not available.	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Company Name</b>	ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.	
<b>Address</b>	2829 Lakeland Drive Jackson, MS 39232 USA	
<b>After hours telephone number</b>	1-800-222-7122	
<b>Normal work hours telephone number</b>	1-877-982-7667	
<b>Website</b>	www.ergonarmor.com	
<b>E-mail</b>	sds@ergon.com	
<b>Emergency 24-hour telephone number</b>	CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887	
<b>Information on operation hours</b>	8:00 a.m. to 5:00 p.m.	

**2. Hazard(s) identification**

<b>Physical hazards</b>	Flammable liquids	Category 3
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning
<b>Hazard statement</b>	Flammable liquid and vapor. Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects. Causes serious eye irritation. May cause respiratory irritation. Causes skin irritation. Suspected of causing cancer. Toxic to aquatic life.

## Precautionary statement

### Prevention

Observe good industrial hygiene practices. Do not breathe mist or vapor. Take precautionary measures against static discharge. Use only non-sparking tools. Do not eat, drink or smoke when using this product. Use explosion-proof electrical/ventilating/lighting equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ground/bond container and receiving equipment. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep container tightly closed.

### Response

Wash hands after handling. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. In case of fire: Use appropriate media to extinguish. Specific treatment is urgent (see this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Collect spillage.

### Storage

Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

Not applicable.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Vinyl Ester Resin		68002-44-8	45 - 55
STYRENE		100-42-5	35 - 45

## 4. First-aid measures

### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

### Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

### Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

### Indication of immediate medical attention and special treatment needed

Treat symptomatically.

### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

### General fire hazards

No unusual fire or explosion hazards noted.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Refrigeration recommended.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
STYRENE (CAS 100-42-5)	Ceiling	200 ppm
	TWA	100 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
STYRENE (CAS 100-42-5)	STEL	40 ppm
	TWA	20 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
STYRENE (CAS 100-42-5)	STEL	425 mg/m <sup>3</sup>
		100 ppm
	TWA	215 mg/m <sup>3</sup>
		50 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
STYRENE (CAS 100-42-5)	40 µg/l	Styrene	Urine	*
	400 mg/g	Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	*

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

STYRENE (CAS 100-42-5)

Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

STYRENE (CAS 100-42-5)

Skin designation applies.

<b>Appropriate engineering controls</b>	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear protective gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Viscous liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Light purple
<b>Odor</b>	Sharp, styrene
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-23.8 °F (-31 °C) estimated
<b>Initial boiling point and boiling range</b>	294 °F (145.56 °C)
<b>Flash point</b>	90.0 - 95.0 °F (32.2 - 35.0 °C)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1.1 % estimated
<b>Flammability limit - upper (%)</b>	6.1 % estimated
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.04 - 1.06
<b>Relative density temperature</b>	77 °F (25 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	914 °F (490 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	250 - 550 cP
<b>Viscosity temperature</b>	77 °F (25 °C)

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport
<b>Chemical stability</b>	Material is stable under normal conditions.

<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids. Aluminum. Peroxides.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
STYRENE (CAS 100-42-5)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	24 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	1 g/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

#### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Risk of cancer cannot be excluded with prolonged exposure.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

STYRENE (CAS 100-42-5) 2A Probably carcinogenic to humans.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

STYRENE (CAS 100-42-5) Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity** Possible reproductive hazard.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects

## 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.

Product	Species		Test Results
PENNTROWEL VINYL ESTER RESIN (All Colors)			
<b>Aquatic</b>			
Fish	LC50	Fish	76.195 mg/l, 96 hours estimated
Components	Species		Test Results
STYRENE (CAS 100-42-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia)	42 g/ml, 24 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	5.1 - 16 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

STYRENE 2.95

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**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. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

**UN number** UN1866  
**UN proper shipping name** Resin solution, flammable, MARINE POLLUTANT  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Label(s)** 3  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**Special precautions for user** Not available.  
**Special provisions** B1, B52, IB3, T2, TP1  
**Packaging exceptions** 150  
**Packaging non bulk** 173  
**Packaging bulk** 242

#### IATA

**UN number** UN1866  
**UN proper shipping name** Resin solution flammable  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** No.

**ERG Code** 3L  
**Special precautions for user** Not available.  
**Other information**  
**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**UN number** UN1866  
**UN proper shipping name** RESIN SOLUTION flammable, MARINE POLLUTANT  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-E, S-E  
**Special precautions for user** Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

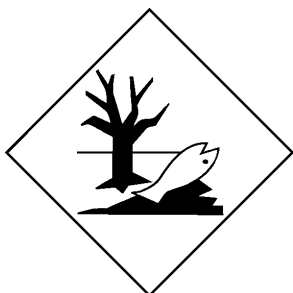
**DOT**



**IATA; IMDG**



**Marine pollutant**



**General information** DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

**15. Regulatory information**

**US federal regulations** 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)**

STYRENE (CAS 100-42-5) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312** Yes**Hazardous chemical**

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
 Acute toxicity (any route of exposure)  
 Skin corrosion or irritation  
 Serious eye damage or eye irritation  
 Carcinogenicity  
 Specific target organ toxicity (single or repeated exposure)  
 Hazard not otherwise classified (HNOC)

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
STYRENE	100-42-5	35 - 45

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

STYRENE (CAS 100-42-5)

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

STYRENE (CAS 100-42-5) Other Flavoring Substances with OSHA PEL's

**US state regulations****California Proposition 65****WARNING:** 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.**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

STYRENE (CAS 100-42-5) Listed: April 22, 2016

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

STYRENE (CAS 100-42-5)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes



Country(s) or region	Inventory name	On inventory (yes/no)*
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

<b>Issue date</b>	04-24-2015
<b>Revision date</b>	10-05-2020
<b>Version #</b>	05
<b>NFPA ratings</b>	Health: 2 Flammability: 3 Instability: 1
<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.
<b>Revision information</b>	Hazard(s) identification: Response Hazard(s) identification: Storage Hazard(s) identification: Hazard statement Fire-fighting measures: Specific hazards arising from the chemical Exposure controls/personal protection: Appropriate engineering controls Physical & Chemical Properties: Multiple Properties Regulatory Information: United States HazReg Data: North America