


1. Identification

Product identifier	PENNCOAT™ 331 RESIN (All Colors)
Other means of identification	None.
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company Name	ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.
Address	2829 Lakeland Drive Jackson, MS 39232 USA
After hours telephone number	1-800-222-7122
Normal work hours telephone number	1-877-982-7667
Website	www.ergonarmor.com
E-mail	sds@ergon.com
Emergency 24-hour telephone number	CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887
Information on operation hours	8:00 a.m. to 5:00 p.m.

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 5
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Germ cell mutagenicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		

Signal word Warning

Hazard statement Flammable liquid and vapor. May be harmful if swallowed. Causes skin irritation. Harmful if inhaled. Causes serious eye irritation. Suspected of causing genetic defects. Harmful to aquatic life.

Precautionary statement**Prevention**

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

Response	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. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media for extinction.
Storage	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep 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	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Vinyl Ester Resin		68002-44-8	60 - 80
Glass Flake			15 -25
STYRENE		100-42-5	5 - 15

4. First-aid measures

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. For minor skin contact, avoid spreading material on unaffected skin. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	If swallowed, do NOT induce vomiting. Give a glass of water. Never give liquid to an unconscious person. If ingestion of a large amount does occur, call a poison control center immediately. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Keep victim warm. Keep victim under observation. 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. Carbon dioxide (CO2). Foam. Dry chemical.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	In the event of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing mist/vapors. Do not touch or walk through spilled material.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth or absorbent material then 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

All equipment used when handling the product must be grounded. Avoid contact with eyes, skin, and clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged exposure. Wear personal protective equipment. Use only with adequate ventilation. Wash thoroughly after handling. Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities

Store in cool place. The pressure in sealed containers can increase under the influence of heat. Keep away from heat and sources of ignition. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a well-ventilated place. Keep container tightly closed. Use care in handling/storage. Do not eat, drink or smoke when using the product.

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	20 ppm
	TWA	10 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

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

Appropriate engineering controls	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Goggles/face shield are recommended.
Skin protection	
Hand protection	Wear protective gloves.
Other	Wear appropriate clothing to prevent any possibility of skin contact with solutions containing 10% or more of this chemical.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Not available.
General hygiene considerations	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

Appearance	Viscous liquid
Physical state	Liquid.
Form	Viscous Liquid.
Color	Grey.
Odor	Styrene
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	294 °F (145.56 °C)
Flash point	89.6 - 95.0 °F (32.0 - 35.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	1.1
Explosive limit - upper (%)	6.1
Vapor pressure	7 hPa
Vapor density	3.6
Relative density	1.07 - 1.08
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	914 °F (490 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
VOC	30 - 40 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions. However, this material can undergo hazardous polymerization.
Possibility of hazardous reactions	Hazardous polymerization can occur. Heat will speed polymerization.
Conditions to avoid	Contact with acids. Avoid contact with oxidizing agents. Heat, flames and sparks.

Incompatible materials Acids. Aluminum chlorides. Halogens. Metal salts. Peroxides. Strong bases. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation May be harmful if inhaled.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Contact may cause redness, burning, drying, and cracking of the skin, and skin damage. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Causes serious eye irritation.

Information on toxicological effects

Acute toxicity Harmful if swallowed - may enter lungs if swallowed or vomited. Harmful if inhaled.

Components	Species	Test Results
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STYRENE (CAS 100-42-5)

Acute

Oral

LD50

Rat

1 g/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity This product contains crystalline silica. Silica is a known carcinogen; however in this encapsulated form the normal routes of exposure are unavailable.

IARC Monographs. Overall Evaluation of Carcinogenicity

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

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

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

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Causes damage to the following organs through prolonged or repeated exposure: Central nervous system. Respiratory system.

Aspiration hazard Not available.

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

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product	Species	Test Results
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PENNCOAT™ 331 RESIN (All Colors)

Aquatic

Acute

Crustacea

EC50

Daphnia

3333.3333, 48 hours estimated

Fish

LC50

Fish

284.4224, 96 hours estimated

Components	Species	Test Results
STYRENE (CAS 100-42-5)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia)
		42, 24 hours
<i>Acute</i>		
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 Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

STYRENE 2.95

Mobility in soil Not 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 Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

Waste from residues / unused products Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

Contaminated packaging Since emptied containers 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
Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
Packing group III
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
Transport hazard class(es)
Class 3

Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant NO
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



15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
 This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

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 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

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
 Germ cell mutagenicity

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
STYRENE	100-42-5	5 - 15

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

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

STYRENE (CAS 100-42-5)

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

STYRENE (CAS 100-42-5)

Listed: April 22, 2016

International Inventories

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

Issue date	02-16-2022
Revision date	06-13-2022
Version #	02
Further information	HMIS® is a registered trade and service mark of the NPCA.
References	HSDB IARC Monographs. Overall Evaluation of Carcinogenicity
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. The information given is based on data available for the material, the components of the material, and similar materials.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.