SAFETY DATA SHEET

1. Identification

Product identifier	**TTS Novolac Grout Resin**
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	Not classified.	
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word	Warning
Hazard statement	Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention	Keep container tightly closed. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling.

Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER or doctor/physician. Collect spillage. Hazardous to the aquatic environment. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If eye irritation persists: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep container tightly closed.
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	%
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER		28064-14-4	70 - 90
1-METHOXYPROPAN-2-OL		107-98-2	5 - 15
BUTYL GLYCIDYL ETHER		2426-08-6	1 - 5
CRESYL GLYCIDYL ETHER		2210-79-9	1 - 5
EPICHLOROHYDRIN		106-89-8	< 1

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 or poison control center immediately. Call a POISON CENTER or doctor/physician if you feel unwell. Call a physician if symptoms develop or persist.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention. Wash clothing separately before reuse.
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 if irritation develops and persists.
Ingestion	Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim ingested the substance.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes. Prolonged exposure may cause chronic effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Irritant effects. May cause allergic skin reaction. Corrosive effects.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Take off contaminated clothing and shoes immediately. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog.
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. By heating and fire, harmful vapors/gases may be formed.

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. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Structural firefighters protective clothing will only provide limited protection. Wear suitable protective equipment.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use standard firefighting procedures and consider the hazards of other involved materials. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Water runoff can cause environmental damage.

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.

General fire hazards

Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Avoid inhalation of vapors or mists. Avoid skin contact and inhalation of vapors during disposal of spills.

Methods and materials for containment and cleaning up

The product is immiscible with water and will spread on the water surface

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 spillage with non-combustible, absorbent material. Absorb in vermiculite, dry sand or earth or absorbent material then place into containers. Following product recovery, flush area with water. 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.

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

Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash hands thoroughly after handling. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a well-ventilated place. Store in original tightly closed container. Keep container dry. Store in a closed container away from incompatible materials. Keep away from food, drink and animal feedingstuffs. Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	PEL	270 mg/m3
		50 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
EPICHLOROHYDRIN (CAS 106-89-8)	PEL	19 mg/m3
		5 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
1-METHOXYPROPAN-2-OL (CAS 107-98-2)	STEL	100 ppm
	TWA	50 ppm
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	TWA	3 ppm
EPICHLOROHYDRIN (CAS 106-89-8)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1-METHOXYPROPAN-2-OL (CAS 107-98-2)	STEL	540 mg/m3
		150 ppm
	TWA	360 mg/m3
		100 ppm
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	Ceiling	30 mg/m3
		5.6 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

1-METHOXYPROPAN-2-OL (CAS 107-98-2)	Can be absorbed through the skin.
EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

EPICHLOROHYDRIN (CAS 106-89-8)	Skin designation applies.

US - Tennessee OELs: Skin designation

EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

BUTYL GLYCIDYL ETHER (CAS 2426-08-6)	Can be absorbed through the skin.
EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

EPICHLOROHYDRIN (CAS 106-89-8)	Can be absorbed through the skin.

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 Avoid contact with eyes. Wear eye/face protection. Chemical goggles are recommended. Face-shield. Eye wash fountain is recommended. Not normally needed.

Skin protection

Hand protection Wear protective gloves. Not normally needed.

Other Avoid contact with the skin. Wear appropriate chemical resistant clothing. Wear suitable protective clothing. Wear protective gloves. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection	Wear suitable respiratory protection. Use personal protective equipment as required. Wear positive pressure self-contained breathing apparatus (SCBA). Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Not available.
General hygiene considerations	When using do not smoke. When using, do not eat, drink or smoke. Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Avoid contact with eyes. Avoid contact with skin. Wash hands after handling. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	Not established
	246.2 °F (119 °C) estimated
Flash point	> 212.0 °F (> 100.0 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	10.57 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	1.19 @ 25 C
VOC	0.06 % estimated

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Risk of ignition. Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None under normal conditions. Heat, flames and sparks. High temperatures.
Incompatible materials	Strong acids. Strong oxidizing agents. Amines.

Hazardous decomposition products Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system.

Skin contact Causes severe skin burns. May cause sensitization by skin contact

Eye contact Causes serious eye irritation.

Ingestion Causes digestive tract burns. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. Irritant effects.

Information on toxicological effects

Acute toxicity Not established.

Components	Species	Test Results
1-METHOXYPROPAN-2-OL (CAS 107-98-2)		
Acute		
Dermal		
LD50	Rabbit	13 g/kg
Inhalation		
LC50	Rat	54.6 mg/l, 4 Hours
Oral		
LD50	Rat	5.71 g/kg
BUTYL GLYCIDYL ETHER (CAS 2426-08-6)		
Acute		
Dermal		
LD50	Rabbit	0.788 g/kg
Inhalation		
LC50	Rat	> 670 mg/l, 8 Hours
Oral		
LD50	Rat	2.05 g/kg
CRESYL GLYCIDYL ETHER (CAS 2210-79-9)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg
EPICHLOROHYDRIN (CAS 106-89-8)		
Acute		
Oral		
LD50	Rat	90 mg/kg

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

Skin corrosion/irritation Corrosive to skin and eyes.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

ACGIH sensitization

N-BUTYL GLYCIDYL ETHER (BGE) (CAS 2426-08-6) Dermal sensitization

Respiratory sensitization Not available.

Skin sensitization May cause sensitization by skin contact. May cause an allergic skin reaction.

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

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

EPICHLOROHYDRIN (CAS 106-89-8) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

EPICHLOROHYDRIN (CAS 106-89-8) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Not available. Not classified.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

Chronic effects Not established.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity Accumulation in aquatic organisms is expected. Contains a substance which causes risk of hazardous effects to the environment. Not expected to be harmful to aquatic organisms. Toxic to aquatic life with long lasting effects. Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment.

Components		Species	Test Results
EPICHLOROHYDRIN (CAS 106-89-8)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	9.1 - 12.3 mg/l, 96 hours
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER (CAS 28064-14-4)			
Aquatic			
Acute			
Fish	LC50	Fish	1 - 10 mg/l

* 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 Not available.

Partition coefficient n-octanol / water (log Kow)

BUTYL GLYCIDYL ETHER	0.63
EPICHLOROHYDRIN	0.45

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Do not discharge into drains, water courses or onto the ground. Dispose of contents/container in accordance with local/regional/national/international 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). Avoid discharge into water courses or onto the ground.

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

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

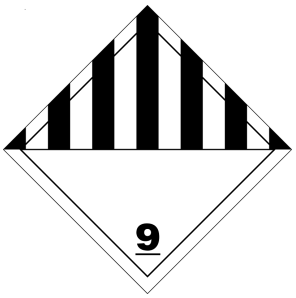
IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER, CRESYL GLYCIDYL ETHER), MARINE POLLUTANT (EPICHLOROHYDRIN)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Not available.

EPICHLOROHYDRIN

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

IMDG



Marine pollutant

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

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.
One or more components are not listed on TSCA.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1-METHOXYPROPAN-2-OL (CAS 107-98-2)	Listed.
EPICHLOROHYDRIN (CAS 106-89-8)	Listed.

SARA 304 Emergency release notification

EPICHLOROHYDRIN (CAS 106-89-8)	100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
EPICHLOROHYDRIN	106-89-8	100	1000		

Classified hazard categories

Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

EPICHLOROHYDRIN (CAS 106-89-8)

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

EPICHLOROHYDRIN (CAS 106-89-8)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

EPICHLOROHYDRIN (CAS 106-89-8) Listed: October 1, 1987

California Proposition 65 - CRT: Listed date/Male reproductive toxin

EPICHLOROHYDRIN (CAS 106-89-8) Listed: September 1, 1996

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

1-METHOXYPROPAN-2-OL (CAS 107-98-2)
EPICHLOROHYDRIN (CAS 106-89-8)

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)	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 06-26-2020

Version #	01
Further information	HMIS® is a registered trade and service mark of the NPCA.
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
References	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Disclaimer	This safety data sheet was prepared in accordance with the Safety Data Sheet for Chemica Products (JIS Z 7250:2005). Additional information is given in the Material Safety Data Sheet. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	Product and Company Identification: Alternate Trade Names Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data