

**1. Identification**

<b>Product identifier</b>	<b>TUFCHEM™ II MEMBRANE - SPRAY GRADE RESIN PART A</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>	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1
	Carcinogenicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**


<b>Signal word</b>	Danger
<b>Hazard statement</b>	Flammable liquid and vapor. Causes skin irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer.
<b>Precautionary statement</b>	
<b>Prevention</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Take precautionary measures against static discharge. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
<b>Response</b>	IF exposed or concerned: Get medical advice/attention. Specific treatment see Section 4 of this SDS. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF ON SKIN: Wash with plenty of soap and water. In case of fire: Use appropriate media for extinction.
<b>Storage</b>	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations. See section 13 of this SDS for disposal instructions.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
ASPHALT, OXIDIZED		64742-93-4	40 - 50
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY		64742-48-9	25 - 35
BENZENE		71-43-2	< 1
QUARTZ		14808-60-7	< 1
Other components below reportable levels			49.43

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash off with soap and plenty of water. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth thoroughly. 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. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Aspiration may cause pulmonary edema and pneumonitis. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Not available.
<b>Indication of immediate medical attention and special treatment needed</b>	In case of shortness of breath, give oxygen. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Dry powder. Carbon dioxide (CO2). Extinguish with water fog.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Fire may produce irritating, corrosive and/or toxic gases.
<b>Special protective equipment and precautions for firefighters</b>	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.
<b>Fire fighting equipment/instructions</b>	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. 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. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage.
<b>Specific methods</b>	In the event of fire, cool tanks with water spray. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Remove sources of ignition. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

### Methods and materials for containment and cleaning up

Dike far ahead of spill for later disposal. Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Collect spillage. Prevent product from entering drains.

Never return spills in original containers for re-use.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

## 7. Handling and storage

### Precautions for safe handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash thoroughly after handling. Do not empty into drains.

### Conditions for safe storage, including any incompatibilities

The pressure in sealed containers can increase under the influence of heat. Do not handle or store near an open flame, heat or other sources of ignition. 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. Store in a well-ventilated place. Keep container tightly closed. Use care in handling/storage.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
BENZENE (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

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

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.

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

Components	Type	Value
BENZENE (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
BENZENE (CAS 71-43-2)	STEL	2.5 ppm	
	TWA	0.5 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

#### U.S. - NIOSH

Components	Type	Value
ASPHALT, OXIDIZED (CAS 64742-93-4)	REL	5 mg/m3

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

Components	Type	Value	Form
BENZENE (CAS 71-43-2)	STEL	1 ppm	
	TWA	0.1 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

## Biological limit values

### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
BENZENE (CAS 71-43-2)	25 µg/g	S-Phenylmercap- turic acid	Creatinine in urine	*

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

## Exposure guidelines

### US - California OELs: Skin designation

BENZENE (CAS 71-43-2) Can be absorbed through the skin.

### US ACGIH Threshold Limit Values: Skin designation

BENZENE (CAS 71-43-2) Danger of cutaneous absorption

## 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** Chemical goggles are recommended.

### Skin protection

**Hand protection** Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

**Other** Wear appropriate chemical resistant clothing. Chemical resistant gloves.

### Respiratory 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. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

Black liquid

### Physical state

Liquid.

### Form

Semi-solid at ambient temperature

### Color

Black

### Odor

Not available.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

Not available.

### Initial boiling point and boiling range

300 - 360 °F (148.89 - 182.22 °C)

### Flash point

100.0 - 140.0 °F (37.8 - 60.0 °C)

### 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

Not available.

### Vapor density

Not available.

### Relative density

Not available.

### Solubility(ies)

**Solubility (water)** Not available.

### Partition coefficient (n-octanol/water)

Not available.

### Auto-ignition temperature

Not available.

### Decomposition temperature

Not available.

**Viscosity** Not available.

**Other information**

**Specific gravity** 1 - 1.05

**VOC** 1.23 lb/gal

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Stable under normal temperature conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Heat, flames and sparks.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** Irritants. Toxic gas.

**11. Toxicological information**

**Information on likely routes of exposure**

**Inhalation** Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

**Skin contact** Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Eye contact** May be irritating to eyes.

**Ingestion** May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms related to the physical, chemical and toxicological characteristics** Not available.

**Information on toxicological effects**

**Acute toxicity** Not classified.

**Skin corrosion/irritation** May be irritating to the skin. May cause defatting of the skin, but is neither an irritant nor a sensitizer.

**Serious eye damage/eye irritation** May be irritating to eyes.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**Skin sensitization** Irritating to skin.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

ASPHALT, OXIDIZED (CAS 64742-93-4)	2A Probably carcinogenic to humans.
BENZENE (CAS 71-43-2)	1 Carcinogenic to humans.
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY (CAS 64742-48-9)	3 Not classifiable as to carcinogenicity to humans.
QUARTZ (CAS 14808-60-7)	1 Carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

BENZENE (CAS 71-43-2)	Cancer
QUARTZ (CAS 14808-60-7)	Cancer

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

BENZENE (CAS 71-43-2)	Known To Be Human Carcinogen.
QUARTZ (CAS 14808-60-7)	Known To Be Human Carcinogen.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**Specific target organ toxicity - single exposure** May cause drowsiness or dizziness.

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

**Aspiration hazard** Not classified.

**Chronic effects** Not expected to be hazardous by OSHA criteria.

**Further information**

Symptoms may be delayed.

**12. Ecological information****Ecotoxicity**

Components of this product are hazardous to aquatic life. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
TUFICHEM™ II MEMBRANE - SPRAY GRADE RESIN PART A		
<b>Aquatic</b>		
Crustacea	EC50 Daphnia	10137.4385, 48 hours
Fish	LC50 Fish	42051.1719, 96 hours
<i>Acute</i>		
Crustacea	EC50 Daphnia	14600, 48 hours estimated
Fish	LC50 Fish	9833.333, 96 hours estimated

**Components****Species****Test Results**

BENZENE (CAS 71-43-2)

**Aquatic***Acute*

Crustacea	EC50	Water flea (Daphnia magna)	>= 8.76 - <= 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.9, 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)**

BENZENE 2.13

**Mobility in soil** Not available.**Other adverse effects** Not available.**13. Disposal considerations****Disposal instructions**

Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Dispose of this material and its container to hazardous or special waste collection point. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazardous waste code**

D001: Waste Flammable material with a flash point &lt;140 F

**Waste from residues / unused products**

Dispose of in accordance with local regulations.

**Contaminated packaging**

Offer rinsed packaging material to local recycling facilities.

**14. Transport information****DOT**

<b>UN number</b>	UN1999
<b>UN proper shipping name</b>	Tars, liquid
<b>Transport hazard class(es)</b>	
<b>Class</b>	Combustible Liquid
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Special precautions for user</b>	If shipped by ground in quantities LESS than 119 gallons (450 L): Not regulated as a hazardous material.
<b>Special provisions</b>	B1, B13, IB3, T1, TP3
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	242

**IATA****UN number** UN1999

**UN proper shipping name** Tars, liquid  
**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** UN1999  
**UN proper shipping name** Tars, liquid  
**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.

**IATA; IMDG**



**General information**

If shipped by ground in quantities LESS than 119 gallons (450 L): Not regulated as a hazardous material. If shipped by vessel in individual containers that are less than 119 gallons (450 L) each, then IMDG 2.3.2.5 exception applies: Not regulated as a hazardous material.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
 CERCLA/SARA Hazardous Substances - Not applicable.

**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)**

BENZENE (CAS 71-43-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

BENZENE (CAS 71-43-2) Cancer  
 QUARTZ (CAS 14808-60-7) Cancer  
 BENZENE (CAS 71-43-2) Central nervous system  
 QUARTZ (CAS 14808-60-7) lung effects  
 BENZENE (CAS 71-43-2) Blood

QUARTZ (CAS 14808-60-7)  
BENZENE (CAS 71-43-2)  
QUARTZ (CAS 14808-60-7)  
BENZENE (CAS 71-43-2)

immune system effects  
Aspiration  
kidney effects  
Skin  
Eye  
respiratory tract irritation  
Flammability

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

### SARA 302 Extremely hazardous substance

Not listed.

### SARA 311/312 Hazardous chemical

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Germ cell mutagenicity  
Carcinogenicity  
Specific target organ toxicity (single or repeated exposure)

### SARA 313 (TRI reporting)

Not regulated.

## Other federal regulations

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

BENZENE (CAS 71-43-2)

### 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

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))

BENZENE (CAS 71-43-2)  
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY (CAS 64742-48-9)  
QUARTZ (CAS 14808-60-7)

## California Proposition 65

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

ASPHALT, OXIDIZED (CAS 64742-93-4) Listed: January 1, 1990  
BENZENE (CAS 71-43-2) Listed: February 27, 1987  
QUARTZ (CAS 14808-60-7) Listed: October 1, 1988

### California Proposition 65 - CRT: Listed date/Developmental toxin

BENZENE (CAS 71-43-2) Listed: December 26, 1997

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

BENZENE (CAS 71-43-2) Listed: December 26, 1997

## 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



<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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** 10-19-2022

**Version #** 01

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**NFPA ratings**  
Health: 2  
Flammability: 2  
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**  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision information**  
Product and Company Identification: Alternate Trade Names  
Composition / Information on Ingredients: Disclosure Overrides  
Handling and storage: Precautions for safe handling  
Physical & Chemical Properties: Multiple Properties  
Transport information: General information  
Regulatory Information: United States  
HazReg Data: North America