

**1. Identification**
**Product identifier** **FURALAC MEMBRANE HARDENER**
**Other means of identification** Not available.

**Recommended use** Not available.

**Recommended restrictions** None known.

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

**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, oral Category 5  
 Skin corrosion/irritation Category 2  
 Serious eye damage/eye irritation Category 1

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**

**Signal word** Danger

**Hazard statement** Causes skin irritation. Causes serious eye damage.

**Prevention** Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** IF ON SKIN: Wash with plenty of water. Specific treatment see Section 4 of this SDS. If skin irritation or rash occurs, seek medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor/. Take off contaminated clothing and wash before reuse.

**Storage** Store in accordance with local/regional/national regulations.

**Disposal** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**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	%
PHTHALOYL CHLORIDE		88-95-9	80 - 95

Chemical name	Common name and synonyms	CAS number	%
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER		131-11-3	0 - 40

#### 4. First-aid measures

<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Rinse with water. Flush eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Not available.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Powder.
<b>Unsuitable extinguishing media</b>	Water.
<b>Specific hazards arising from the chemical</b>	May decompose with water to produce toxic/irritating gases.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas.
<b>Methods and materials for containment and cleaning up</b>	Remove sources of ignition.  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 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 in original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid prolonged exposure. Avoid release to the environment. Use care in handling/storage. Avoid contact with moist air.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep away from heat, sparks and open flame. Store in original tightly closed container. Use care in handling/storage. Store in accordance with local/regional/national/international regulation. Avoid contact with moist air.

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)	PEL	5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)	TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)	TWA	5 mg/m <sup>3</sup>

### Biological limit values

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

### Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Provide adequate general and local exhaust ventilation.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Do not get in eyes. Chemical goggles are recommended. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

#### Hand protection

Wear appropriate chemical resistant gloves. If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

#### Skin protection

##### Other

Chemical/solvent resistant gloves are recommended. If contact with forearms is likely, use gauntlet-style 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

Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

Not available.

### Physical state

Liquid.

### Form

Liquid.

### Color

Not available.

### Odor

Not available.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

Not established

### Initial boiling point and boiling range

542.66 °F (283.7 °C) estimated

### Flash point

> 518.0 °F (> 270.0 °C)

### Evaporation rate

Not available.

### Flammability (solid, gas)

Not available.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 0.9 % estimated

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** 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>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	915 °F (490.56 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Specific gravity</b>	1.37

## 10. Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Not available.
<b>Conditions to avoid</b>	Moisture, heating and strong oxidizing substances.
<b>Incompatible materials</b>	Nitrates.
<b>Hazardous decomposition products</b>	Toxic gas. Irritants. Nitrogen oxides (NOx).

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Not classified. Not available.
<b>Inhalation</b>	Not classified. Not available.
<b>Skin contact</b>	Not classified. Not available.
<b>Eye contact</b>	Harmful in contact with eyes. Not classified. Not available.

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

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
FURALAC MEMBRANE HARDENER (CAS Mixture)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	20869.5645 mg/kg estimated
	Mouse	62608.6953 mg/kg estimated
	Rat	20869.5645 mg/kg estimated
<i>Other</i>		
LD50	Mouse	12000 mg/kg estimated
	Rat	2817.3914 mg/kg estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)

#### Acute

##### *Dermal*

LD50 Rat 38000 mg/kg

##### *Oral*

LD50 Guinea pig 2400 mg/kg  
 Mouse 7200 mg/kg  
 Rat 2400 mg/kg

Components	Species	Test Results
<i>Other</i>		
LD50	Mouse	1380 mg/kg
	Rat	324 mg/kg

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

<b>Skin corrosion/irritation</b>	Not available. Not classified.
<b>Serious eye damage/eye irritation</b>	Harmful in contact with eyes. None known. Not classified. Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not classified. Not available.
<b>Skin sensitization</b>	Not classified. None known. Not available.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Not available. Not classified.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not available. Not classifiable as to carcinogenicity to humans. Not classified.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
	Not listed.
<b>Reproductive toxicity</b>	Not available. Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified. Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified. Not available.
<b>Aspiration hazard</b>	Not classified. Not available.
<b>Chronic effects</b>	Hazardous by OSHA criteria. Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.
<b>Further information</b>	This product has no known adverse effect on human health.

## 12. Ecological information

<b>Ecotoxicity</b>	Components of this product are hazardous to aquatic life. Not expected to be harmful to aquatic organisms.
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Product	Species	Test Results
FURALAC MEMBRANE HARDENER (CAS Mixture)		
Crustacea	EC50	Daphnia
		399.1304 mg/l, 48 hours estimated
Fish	LC50	Fish
		570.0483 mg/l, 96 hours estimated
Components	Species	Test Results
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna)
		45.9 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)
		29 mg/l, 96 hours

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

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	Not available.
<b>Partition coefficient n-octanol / water (log Kow)</b>	
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER	1.6
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	Not available.

### 13. Disposal considerations

<b>Disposal instructions</b>	Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.
<b>Hazardous waste code</b>	Not regulated.
<b>US RCRA Hazardous Waste U List: Reference</b>	
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)	U102
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	I
<b>Special precautions for user</b>	Not available.
<b>Special provisions</b>	A6, B10, T14, TP2, TP27
<b>Packaging exceptions</b>	None
<b>Packaging non bulk</b>	201
<b>Packaging bulk</b>	243

#### IATA

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	I
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Not available.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

#### IMDG

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	I
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	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** This product is 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)

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER Listed.  
(CAS 131-11-3)

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

Not listed.

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

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312** No

**Hazardous chemical**

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER	131-11-3	0 - 40

### Other federal regulations

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

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)

#### 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

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.

#### US. Massachusetts RTK - Substance List

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)

#### US. New Jersey Worker and Community Right-to-Know Act

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3) 500 LBS

#### US. Pennsylvania RTK - Hazardous Substances

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)

**US. Rhode Island RTK**

1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (CAS 131-11-3)

**US. California Proposition 65**

Not Listed.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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
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** 04-14-2015**Revision date** 01-14-2016**Version #** 02**Further information** HMIS® is a registered trade and service mark of the NPCA.**References**

ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents  
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: Product and Company Identification  
GHS: Classification