

## 1. Identification

**Product identifier** **FURALAC MEMBRANE HARDENER**

**Other means of identification** None.

**Recommended use** Not available.

**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

**Company Name** Armor Limited, Inc.  
**Address** 2410 US-15 South, Sumter, SC 29150

**After hours telephone number** 1-877-982-7667

**Normal work hours telephone number** 1-877-982-7667

**Website** www.armor-inc.com  
**E-mail** customerservice@armor-inc.com

**Emergency 24-hour telephone number** CHEMTREC North America: 800-424-9300, International: +1-703-527-3887

**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, dermal	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Sensitization, respiratory	Category 1
Sensitization, skin	Category 1
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger

**Hazard statement** Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation.

### Precautionary statement

**Prevention** Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wash thoroughly after handling.

<b>Response</b>	Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Specific treatment see Section 4 of this SDS. If skin irritation or rash occurs, seek medical attention. Take off contaminated clothing and wash before reuse. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. 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. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	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.
<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	%
PHTHALOYL DICHLORIDE		88-95-9	60 - 100
Other components below reportable levels			20

### 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. If breathing is difficult, trained personnel should give oxygen. 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. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie, belt, or waistband. If it is suspected that gas or vapor is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Wash clothing separately before reuse. Contact physician if irritation continues. Destroy or thoroughly clean contaminated shoes. Chemical burns must be treated by a physician.
<b>Eye contact</b>	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. Get medical attention if any discomfort continues. Chemical burns must be treated promptly by a physician.
<b>Ingestion</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Remove dentures if any. Never give anything by mouth to a victim who is unconscious or is having convulsions. 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. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Chemical burns must be treated by a physician.
<b>Most important symptoms/effects, acute and delayed</b>	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. May cause redness and pain. Prolonged exposure may cause chronic effects. Wheezing. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. May cause allergic skin reaction. Asthma.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.

## General information

Chemical burns must be treated by a physician. Take off all contaminated clothing immediately. In case of shortness of breath, give oxygen. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

**Suitable extinguishing media** Use extinguishing agent suitable for type of surrounding fire.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Not a fire hazard.

**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.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.

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

## 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. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Small Spills: Stop leak if you can do it without risk. Move containers from spill area. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Dilute with water and mop up if water-soluble.

Large Spills: Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Prevent product from entering drains. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Contaminated absorbent material may pose the same hazard as the spilled product. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dike far ahead of spill for later disposal.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** In case of inadequate ventilation, use respiratory protection. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear appropriate personal protective equipment. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Separate from alkalis. Do not store this material in open or unlabeled containers. Store locked up. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep away from food, drink and animal feedingstuffs.

## 8. Exposure controls/personal protection

**Occupational exposure limits** This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit

**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.

## Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Do not get in eyes. Chemical goggles are recommended. Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.
<b>Skin protection</b>	
<b>Hand protection</b>	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. Neoprene gloves. Latex gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
<b>Other</b>	Wear appropriate footwear. Impervious clothing.
<b>Respiratory protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Thermal hazards</b>	Not available.
<b>General hygiene considerations</b>	Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. 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. Shower, hand and eye washing facilities near the workplace are recommended. Avoid contact with skin. Keep away from food and drink. Wash hands after contact. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

<b>Appearance</b>	Yellow
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Yellow
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Mixed with water, pH is less than 1 (generates hydrochloric acid)
<b>Melting point/freezing point</b>	> 32 °F (> 0 °C)
<b>Initial boiling point and boiling range</b>	516.2 °F (269 °C)
<b>Flash point</b>	> 260.0 °F (> 126.7 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	4 kPa (30 mm Hg) [47°C]
<b>Vapor density</b>	7 [Air=1]
<b>Relative density</b>	1.37
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Reacts with water and ethanol.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	Not Reactive
<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>	None known.
<b>Incompatible materials</b>	Alcohols. Acids. Oxidizing agents. Alkalis. Moisture.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin contact</b>	Causes severe skin burns and eye damage. Harmful in contact with skin. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May cause burns to mouth, throat, and throat.

### Symptoms related to the physical, chemical and toxicological characteristics

Not available.

### Information on toxicological effects

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	May cause severe irritation to eyes.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled
<b>Skin sensitization</b>	May cause allergic skin disorders in sensitive individuals.

<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.
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<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.
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### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

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

Not regulated.

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

Not listed.

<b>Reproductive toxicity</b>	Not available. Not classified.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<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>	No ecotoxicity data noted for the ingredient(s).
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	Not available.
<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. Dispose in accordance with all applicable regulations. Incineration or landfill should only be considered when recycling is not feasible. Empty containers or liners may retain some product residues. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<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). Avoid discharge into water courses or onto the ground.
<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. (PHTHALOYL DICHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	II
<b>Special precautions for user</b>	Not available.
<b>Special provisions</b>	B2, IB2, T11, TP2, TP27
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

#### IATA

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (PHTHALOYL DICHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<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 with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

#### IMDG

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PHTHALOYL DICHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<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.



## 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)

Not 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 Hazardous chemical

Yes

#### Classified hazard categories

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

Not regulated.

#### 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.

## 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

<b>Issue date</b>	04-14-2015
<b>Revision date</b>	12-04-2020
<b>Version #</b>	06
<b>Further information</b>	HMIS® is a registered trade and service mark of the NPCA.
<b>NFPA ratings</b>	Health: 3 Flammability: 1 Instability: 0
<b>References</b>	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
<b>Disclaimer</b>	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.
<b>Revision information</b>	Composition / Information on Ingredients: Ingredients HazReg Data: North America