

1. Identification

Product identifier	HF12XX Series Part B Coating and Lining (All Colors)	
Other means of identification	Not available.	
Recommended use	Not available.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company Name	Ergon Armor	
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, dermal	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Reproductive toxicity (fertility, the unborn child)	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Suspected of damaging fertility or the unborn child by ingestion. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
Prevention	Wear protective gloves. Wear eye/face protection. Avoid breathing mist or vapor. Avoid release to the environment. Wash thoroughly after handling. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace.
Response	Specific treatment see Section 4 of this SDS. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash before reuse. If eye irritation persists: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
4,4'-ISOPROPYLIDENEDIPHENOL		80-05-7	0 - 40
BENZYL ALCOHOL		100-51-6	0 - 40
PHENOL, 4-NONYL-, BRANCHED		84852-15-3	0 - 40
[3-(aminoethyl)phenyl]methanamine		1477-55-0	5 - < 10
Other components below reportable levels			40 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

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. Call a physician or poison control center immediately.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse. Wash clothing separately before reuse.

Eye contact

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. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. 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.

Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

In case of shortness of breath, give oxygen. Immediate medical attention is required. 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. Keep victim warm. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Alcohol foam. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Water. Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire-fighting equipment/instructions

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

Specific methods

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. 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.

Environmental precautions

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

7. Handling and storage**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe mist or vapor. Do not breathe dust or mist. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid prolonged exposure. Do not get this material on clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Handle and open container with care. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

CAUTION Store locked up. Store in a closed container away from incompatible materials. 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. Keep out of the reach of children.

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value
[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)	Ceiling	0.1 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)	Ceiling	0.1 mg/m ³

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
BENZYL ALCOHOL (CAS 100-51-6)	TWA	44.2 mg/m ³ 10 ppm

Biological limit values

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

Exposure guidelines**US - California OELs: Skin designation**

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0) 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**

Chemical goggles and face shield are recommended.

Hand protection

Wear appropriate chemical resistant gloves.

Skin protection**Other**

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

Respiratory protection	Respiratory protection should include at a minimum a fullface air purifying respirator (APR) with combination particulate (P100) and organic vapor (OV) cartridges. A full-face APR has an assigned protection factor (APF) of 50, as designated by OSHA. As a substitute, a PAPR with a loose-fitting hood could be used as respiratory protection.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not get in eyes. Do not get this material on clothing. Do not get this material in contact with skin. 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Light Amber to Golden
Odor	Ammoniacal. Amine-like.
Odor threshold	Not available.
pH	Alkaline
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	200.0 °F (93.3 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
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)	Partial
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	1.02

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization can occur with elevated temperatures.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Alkaline metals. Amines. Peroxides. Fluorine. Chlorine. Phenols. Strong acids, alkalis and oxidizing agents.
Hazardous decomposition products	Toxic gas. If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced. Upon combustion, oxides of chlorine may be released.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. Harmful in contact with skin.
Eye contact	Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of eyes and mucous membranes.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
HF12XX Series Part B Coating and Lining (All Colors) (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	20000 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	10000 mg/l, 8 Hours estimated
<i>Oral</i>		
LD50	Mouse	7391.4673 mg/kg estimated
	Rabbit	19400 mg/kg estimated
	Rat	7361.2622 mg/kg estimated
<i>Other</i>		
LD50	Mouse	9500 mg/kg estimated
	Rabbit	833.3333 mg/kg estimated
	Rat	3140 mg/kg estimated

Components	Species	Test Results
4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)		
Acute		
<i>Oral</i>		
LD50	Mouse	2500 mg/kg
	Rat	3300 mg/kg
<i>Other</i>		
LD50	Rabbit	150 mg/kg
BENZYL ALCOHOL (CAS 100-51-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	1000 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	1580 mg/kg
	Rabbit	1940 mg/kg
	Rat	1230 - 3100 mg/kg
<i>Other</i>		
LD50	Mouse	950 mg/kg
	Rat	314 mg/kg

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

Skin corrosion/irritation	Irritating and may cause redness and pain.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization May cause sensitization by skin contact.

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

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

Not listed.

Reproductive toxicity Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

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

Product	Species	Test Results	
HF12XX Series Part B Coating and Lining (All Colors) (CAS Mixture)			
Crustacea	EC50	Daphnia	0.2514 mg/l, 48 hours estimated
Components	Species	Test Results	
4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	9.2 - 11.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3.6 - 5.4 mg/l, 96 hours
BENZYL ALCOHOL (CAS 100-51-6)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	10 mg/l, 96 hours
PHENOL, 4-NONYL-, BRANCHED (CAS 84852-15-3)			
Aquatic			
Crustacea	EC50	Clam (Mulinia lateralis)	0.0379 mg/l, 48 hours
Fish	LC50	Winter flounder (Pleuronectes americanus)	0.017 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

4,4'-ISOPROPYLIDENEDIPHENOL	3.32
BENZYL ALCOHOL	1.1

Mobility in soil No data 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 Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international 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.

Local disposal regulations Dispose in accordance with all applicable 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). Not applicable.
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. Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s, or Polyamines, liquid, corrosive, n.o.s. (metaxylenediamine), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (metaxylenediamine)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (metaxylenediamine)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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

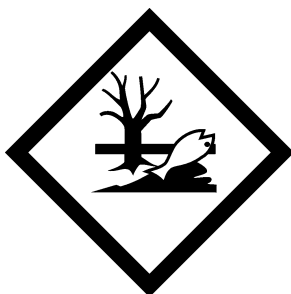
DOT



IATA; IMDG



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.
CERCLA/SARA Hazardous Substances - Not applicable.

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)

4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7) Listed.

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 - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312

Yes

Hazardous chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	0 - 40

Other federal regulations

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

4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)

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

US. Massachusetts RTK - Substance List

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)
4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)
BENZYL ALCOHOL (CAS 100-51-6)

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

4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

[3-(aminoethyl)phenyl]methanamine (CAS 1477-55-0)
4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)
BENZYL ALCOHOL (CAS 100-51-6)

US. Rhode Island RTK

4,4'-ISOPROPYLIDENEDIPHENOL (CAS 80-05-7)

US. California Proposition 65

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
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 07-08-2015

Version # 01

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

References EPA: AQUIRE database
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 Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the mandatory requirements of OSHA.