

Ergon Armor **Revision Number:** 2.000
Issue Date: 01/16/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	FLEXJOINT® HARDENER	ID(s):
Product type:	Hardener for epoxy resin	Region:
Company address:	Ergon Armor Corrosion Engineering P.O. Box 1639 Jackson, MS 39215-1639	Contact information: Telephone: 601.933.3540 Emergency: Call CHEMTREC at 800.424.9300 Internet: www.Ergon.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Viscous liquid Color: Amber Odor: Strong fish-like odor	HMIS: Not established for this product HEALTH: FLAMMABILITY: PHYSICAL HAZARD: Personal Protection: See MSDS section 8 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe * = Chronic Health Hazard
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WARNING! CAUSES RESPIRATORY TRACT IRRITATION. CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE NAUSEA, HEADACHE OR DIZZINESS.

Relevant routes of exposure: Skin contact and inhalation.

Potential Health Effects

Inhalation: Inhalation of this material has caused respiratory tract irritation and, at higher exposures, severe irritation, drowsiness, blurred vision, headache, nausea, dizziness, stupor and loss of consciousness may occur.

Skin contact: Severely irritating to the skin. Can cause burns and irreversible tissue damage. Repeated contact may cause dermatitis (inflammation of the skin) and allergic skin reaction in susceptible individuals.

Eye contact: Severely irritating to the eyes. Can cause burns and irreversible tissue damage.

Ingestion: Although swallowing of this material is unlikely in the industrial setting, if swallowed this material may cause internal injury characterized by pain in the mouth and digestive tract, vomiting and collapse.

Existing conditions aggravated by exposure: Workers with lung disease or reduced lung capacity should have limited exposure to this material.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS-No.	%
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	85 - 95
2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	5 - 10

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion: Do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

Flash point: 204°F (TOC)

Autoignition temperature: NE

Flammable/Explosive limits - lower: NE

Flammable/Explosive limits - upper: NE

Extinguishing media: Use water spray, carbon dioxide, foam or dry chemical.

Special firefighting procedures: *Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.*

Unusual fire or explosion hazards: Avoid breathing fumes from fire exposed material.

Hazardous combustion products: NE

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and

Environmental precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Clean-up methods: Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spilled liquid with sand or earth. Clean up spill immediately, observing precautions in the Personal Protection section of MSDS.

Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Empty container may contain hazardous residues.

Storage: Avoid excessive heat. Store out of direct sunlight in a cool, well-ventilated place. Store in a cool, dry place.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	NE	NE	NE	
2,4,6-Tri(dimethylaminomethyl) phenol	NE	NE	NE	

Engineering controls: Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposures. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection: Avoid breathing vapor or mist. When airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Eye/face protection: Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin protection: Neoprene or Natural rubber gloves should be worn when handling this material. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Wash contaminated clothing and clean protective equipment before reuse. Rinse contaminated skin promptly. Wash skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Viscous liquid
Color:	Amber
Odor:	Strong fish-like odor
Odor threshold:	NE
pH:	NA
Vapor pressure:	<1 @ 20 deg C
Boiling point/range:	>404°F
Melting point/ range:	NA
Specific gravity:	0.98 @ 20/20 deg C
Vapor density:	Heavier than air
Flash point:	204°F (TOC)
Flammable/Explosive limits - lower:	NE
Flammable/Explosive limits - upper:	NE
Autoignition temperature:	NE
Evaporation rate:	NE
Solubility in water:	Partially soluble
Partition coefficient (n-octanol/water):	NA
VOC content:	Nil

10. STABILITY AND REACTIVITY

Stability: This material is chemically stable under normal and anticipated storage and handling conditions.

Hazardous polymerization: Not known to occur

Hazardous decomposition products: Oxides of carbon and nitrogen.

Incompatibility: Avoid contact with strong acids, alkalis, and oxidizers. Contact with chlorinated compounds results in the release of toxic gases. Contact with epoxy resin results in an exothermic reaction.

Conditions to avoid: NE

11. TOXICOLOGICAL INFORMATION

Toxicological Information

Data available for this material and/or its components are summarized below:

General Product Information:

Not available

Component Data:

2,4,6-Tri(dimethylaminomethyl) phenol

LD50/LC50:

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 1,200 mg/kg) or inhaled (LD50 1,280 mg/kg), and severely irritating to rabbit eyes and skin (4-hr exposure; 24-hr exposure, 7.6/8.0).

MUTAGENICITY:

This material produced no genetic changes in a standard test using bacterial cells.

Cancer Lists

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	No	No	No
2,4,6-Tri(dimethylaminomethyl) phenol	No	No	No

Health Effects

Hazardous components	Health Effects / Target Organs
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	NE
2,4,6-Tri(dimethylaminomethyl) phenol	NE

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Data available for this material and/or its components are summarized below:

General Product Information:

Not available

Component Data:

Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of NE

Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Empty containers retain product residue. Note: Chemical additions to, processing of, or otherwise altering this material may render information in this document to be incomplete, inaccurate or otherwise inappropriate for waste management purposes. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

Disposal Regulatory NE

It is the responsibility of the waste generator to determine if the waste meets the definition of a hazardous waste as promulgated at 40 CFR Part 261 subpart C.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

SARA 311/312: Immediate (Acute) Health hazard

Applicable component data listed below:

TSCA 12(b) Export Notification	None listed
CERCLA/SARA Section 302 EHS	None listed
Section 304 EHS RQ	None listed
CLCRA RQ	None listed
Section 313	None listed
RCRA CODE	None listed
CAA 1129(r) TQ	None listed

Canada Regulatory Information

	WHMIS Status	Hazard class(s)
2,4,6-Tri(dimethylaminomethyl) phenol	Disclosure (1%)	D2B

16. OTHER INFORMATION

Revision Information

Revision Date: 8/17/2010
Supersedes Revision Dated: 6/15/2006
Revision Number: 2.000
Revision Summary: New format

Key: NE = Not Established, NA = Not Applicable

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