Ergon Armor

Revision Number: 3.000
Issue Date: 01/18/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **PENNTROWEL® WATER CLEANABLE GROUT HARDENER**
ID(s):

Product type: Hardener component for water cleanable grout system
Region:

Company address:
Ergon Armor
Corrosion Engineering
300 Stevens Drive, Suite 310
Lester, PA 19113

Contact information:
Telephone: 601.933.3540
Emergency: Call CHEMTREC at 800.424.9300
Internet: www.Ergon.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Light medium viscosity liquid
Color: Clear
Odor: Slight amine 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

DANGER! CAUSES EYE AND SKIN BURNS. MAY CAUSE BLINDNESS. MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. MAY CAUSE ALLERGIC RESPIRATORY REACTION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure: Skin contact and inhalation.

Potential Health Effects

Inhalation: Overexposure to vapor or mist may be irritating to the respiratory tract and repeated or prolonged exposure can cause an allergic respiratory tract reaction in susceptible individuals.

Skin contact: Repeated or prolonged skin contact can result in an allergic skin reaction. This material is considered, on the basis of single exposure (acute) animal tests, to be moderately to slightly toxic if absorbed through skin and corrosive to eyes and skin.

Eye contact: Overexposure to vapor or mist may be irritating to the eyes.

Ingestion: While swallowing of this material is unlikely in the industrial setting, if swallowed this material may cause burns of the mouth, throat and digestive tract. This material is considered, on the basis of single exposure (acute) animal tests, to be slightly toxic if ingested.

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.	%
Diethylenetriamine reaction product with bisphenol A-epichlorohydrin polymer	68610-56-0	30 -50
Triethylenetetramine reaction products with tall oil fatty acids	68919-79-9	5 - 10
Diethylenetriamine	111-40-0	1 - 10
Diphenylolpropane	80-05-7	<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: >300°F (PMCC)

Autoignition temperature: NE

Flammable/Explosive limits - lower: NE

Flammable/Explosive limits - upper: NE

Extinguishing media: Use , 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: Closed containers of this material may explode when subjected to heat from

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 unprotected personnel.

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

Storage: Store in a cool, dry place. Avoid excessive heat. Store out of direct sunlight in a cool, well-ventilated 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 exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Diethylenetriamine reaction product with bisphenol A-epichlorohydrin polymer	NE	NE	NE	
Triethylenetetramine reaction products with tall oil fatty acids	NE	NE	NE	
Diethylenetriamine	1 ppm, 4.2 mg/m3 TWA (Skin)1 ppm, 4.2 mg/m3 TWA (Skin)	10 ppm, 42 mg/m3 Ceiling (Skin)	NE	NIOSH REL: 1 ppm TWA (Skin)
Diphenylolpropane	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: Light medium viscosity liquid
Color: Clear
Odor: Slight amine odor
Odor threshold: NE
pH: NA
Vapor pressure: <1 mm Hg @ 20 F

Boiling point/range:	>400°F
Melting point/ range:	NA
Specific gravity:	0.99 @ 25/25
Vapor density:	NE
Flash point:	>300°F (PMCC)
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:	NE

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, oxidizers, copper, copper alloys, chlorinated compounds and epoxy resins.
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:
Diethylenetriamine
LD50/LC50:
Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 1,080-2,330 mg/kg), moderately to slightly toxic to rabbits if absorbed through skin (LD50 670-1,090 mg/kg), and corrosive to rabbit eyes and skin. No deaths were observed in rats exposed to saturated vapor for 8-hours. Allergic skin and respiratory tract reactions have been observed in humans following repeated exposure to this material.

CHRONIC:
Rats orally administered up to 50,000 ppm for 14-days showed decreased body weight, food consumption and spleen weights. Decreased body weight and increased liver, kidney and brain weights were seen in rats administered up to 1060 mg/kg/day by gavage or 15,000 ppm in the diet daily for 90-days. Lifetime dermal exposure to rats produced effects on the liver, lungs, kidneys, spleen and adrenal glands.

MUTAGENICITY:
This material has generally produced no genetic changes in standard tests using bacterial and animal cells and animals, although a few positive results have been observed in standard tests using bacterial and animal cells.

DEVELOPMENTAL TOXICITY/TERATOGENICITY:
No adverse effects were observed in the offspring of rats exposed subcutaneously (10 or 50 mg/kg/day) or dermally (0.4 ml) for life.

Diphenylolpropane
LD50/LC50:

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 2,000-4,000 mg/kg) or rabbits if absorbed through skin (LD50 3,000 mg/kg), moderately irritating to rabbit eyes, and slightly to moderately irritating to rabbit and guinea pig skin.

CHRONIC:

Allergic skin reactions from repeated contact with these type resins are well documented in the literature. In affected workers, these skin rashes may be recurrent and require removal from exposure. A few case reports and studies in mice indicate that the allergic response may be aggravated by exposure to sunlight. Repeated exposure of rats to aerosols of this material (up to 150 mg/m3) resulted in irritant effects and decreased body weight gain; no evidence of systemic toxicity was found. Dietary administration of this material to rats for 14 days at dose levels up to 12,000 ppm also resulted in decreased body weight gain; no deaths or gross lesions were observed. No effects were seen in dogs fed the same dose levels. The National Toxicology Program has conducted long-term (2-year) feeding studies in mice and rats.

MUTAGENICITY:

Other signs of toxicity in treated mice included liver and kidney damage. This material did not produce genetic changes in standard tests with bacterial or animal cells or in a dominant lethal assay in mice.

DEVELOPMENTAL TOXICITY/TERATOGENICITY:

No increase in birth defects was found in the offspring of mice and rats given this material orally during pregnancy, even at levels that were toxic to the mothers. A slight decrease in sperm motility was observed in male mice exposed to this material. Administration of this material via silastic implant did not affect reproduction or fertility in mice. In another continuous breeding protocol study where this material was administered in the diet, evidence for reduced reproduction ability included reduced numbers of litters and live pups per litter.

Cancer Lists

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Diethylenetriamine reaction product with bisphenol A-epichlorohydrin polymer	No	No	No
Triethylenetetramine reaction products with tall oil fatty acids	No	No	No
Diethylenetriamine	No	No	No
Diphenylolpropane	No	No	No

Health Effects

Hazardous components	Health Effects / Target Organs
Diethylenetriamine reaction product with bisphenol A-epichlorohydrin polymer	NE
Triethylenetetramine reaction products with tall oil fatty	NE
Diethylenetriamine	Irritation-Eye, Nose, Throat, Skin---Marked (HE14) Pulmonary sensitization (HE9) HISTORY B606 LAB, 3/82
Diphenylolpropane	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 Disposal via incineration is recommended.

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
Delayed (Chronic) 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

	Category	**de minimis concentration**
Diphenylolpropane	80-05-7	none

RCRA CODE	None listed
CAA 1129(r) TQ	None listed

State Regulations

State Lists (Components on one or more lists)	CA	NJ	PA	RI	NY	MA	MN
Diethylenetriamine	Yes	Yes	Yes	Yes	No	No	Yes
Diphenylolpropane	No	Yes	Yes	No	No	No	No

California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity:

None

Canada Regulatory Information

	WHMIS Status	**Hazard class(s)**

Diethylenetriamine	Disclosure (0.1%)	D2B, E
Diphenylolpropane	Disclosure (0.1%)	D2A, D2B

16. OTHER INFORMATION

Revision Information

Revision Date:	8/17/2010
Supersedes Revision Dated:	6/15/2006
Revision Number:	3.000
Revision Summary:	New format

Key: NE = Not Established, NA = Not Applicable

Prepared by: R. Forsythe

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