

1. Identification

Product identifier **EZ Grout 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, inhalation	Category 3
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Reproductive toxicity	Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Toxic if inhaled. Causes serious eye damage. Suspected of damaging fertility or the unborn child. May cause an allergic skin reaction. Causes severe skin burns and eye damage.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment see Section 4 of this SDS. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.

Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
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	%
Tofa, reaction products with TEPA		68953-36-6	20 - 40
Diethylenetriamine		111-40-0	0 - 20
Phenol, 4,4'-(1-methylethylidene)bis-		80-05-7	0 - 20
TETRAETHYLENE PENTAMINE		112-57-2	2 - 12
Other components below reportable levels			47.5

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. 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. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and plenty of water. Remove contaminated clothing. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Rinse cautiously with water for several 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.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Rinse mouth thoroughly. 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 ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes. Irritant effects.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If you feel unwell, seek medical advice (show the label where possible). Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Carbon dioxide or dry powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Irritating and toxic gases or fumes may be released during a fire.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. 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. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	<p>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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent further leakage or spillage if safe to do so. No special environmental precautions required.</p>
Environmental precautions	

7. Handling and storage

Precautions for safe handling	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Do not get this material on clothing. Avoid contact with clothing. Wear personal protective equipment. Do not use in areas without adequate ventilation. Wear positive pressure self-contained breathing apparatus (SCBA). When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash thoroughly after handling. Handle and open container with care. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Store in original tightly closed container. Keep container tightly closed. Keep container dry. Store in a closed container away from incompatible materials. Keep out of the reach of children. Use care in handling/storage. Store in accordance with local/regional/national/international regulation. Store locked up.

8. Exposure controls/personal protection

Occupational exposure limits			
US. ACGIH Threshold Limit Values (TLV)			
Components	Type	Value	
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm	
US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)			
Components	Type	Value	
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m3	
		1 ppm	
US. OARS. Workplace Environmental Exposure Level (WEEL) Guide			
Components	Type	Value	Form
TETRAETHYLENE PENTAMINE (CAS 112-57-2)	TWA	5 mg/m3	Aerosol.
		1 ppm	Aerosol.
Biological limit values		No biological exposure limits noted for the ingredient(s).	
Exposure guidelines		No exposure standards allocated.	
US - California OELs: Skin designation			
Diethylenetriamine (CAS 111-40-0)		Can be absorbed through the skin.	
US - Minnesota Haz Subs: Skin designation applies			
Diethylenetriamine (CAS 111-40-0)		Skin designation applies.	
US ACGIH Threshold Limit Values: Skin designation			
Diethylenetriamine (CAS 111-40-0)		Danger of cutaneous absorption	
US NIOSH Pocket Guide to Chemical Hazards: Skin designation			
Diethylenetriamine (CAS 111-40-0)		Can be absorbed through the skin.	

US WEEL Guides: Skin designation

TETRAETHYLENE PENTAMINE (CAS 112-57-2)

Can be absorbed through the skin.

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas. General ventilation normally adequate. Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear eye/face protection. Chemical goggles are recommended. Wear safety glasses with side shields (or goggles). Face-shield. Not normally needed.

Skin protection

Hand protection Wear protective gloves. Not normally needed.

Other Wear suitable protective clothing. Wear protective gloves. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Not available.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Avoid contact with clothing. Wash hands after handling and before eating. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Amber.
Odor	Ammoniacal
Odor threshold	Not available.
pH	>7
Melting point/freezing point	Not available.
Initial boiling point and boiling range	>374 °F (>190 °C)
Flash point	259.0 °F (126.1 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	<5.17 mm Hg
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	0.99

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	None under normal conditions.
Incompatible materials	Avoid contact with acids and alkalies. Strong oxidizing substances. Copper.
Hazardous decomposition products	No dangerous reaction known under conditions of normal use. No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Fatal if inhaled.
Skin contact	Causes skin burns. May cause sensitization by skin contact.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed. Not classified.

Symptoms related to the physical, chemical and toxicological characteristics
 Irritating to eyes, respiratory system and skin.

Information on toxicological effects

Acute toxicity Fatal if inhaled.

Components	Species	Test Results
Diethylenetriamine (CAS 111-40-0)		
<u>Acute</u>		
Oral		
LD50	Rat	1080 mg/kg

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

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not classified.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Not available.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Product	Species		Test Results
EZ Grout Hardener			
Aquatic			
Crustacea	EC50	Daphnia	92 mg/l, 48 hours
Fish	LC50	Fish	52.5877 mg/l, 96 hours

Product		Species	Test Results
<i>Acute</i>			
Crustacea	EC50	Daphnia	92 mg/l, 48 hours estimated
Fish	LC50	Fish	35.8093 mg/l, 96 hours estimated
Components		Species	Test Results
Diethylenetriamine (CAS 111-40-0)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Guppy (Poecilia reticulata)	1014 mg/l, 96 hours
Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7)			
Aquatic			
<i>Acute</i>			
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

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

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

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Phenol, 4,4'-(1-methylethylidene)bis-	3.32
TETRAETHYLENE PENTAMINE	1.503

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations. 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.

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.

14. Transport information

DOT	
UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s (Polyamidoamine)
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Label(s)	8
Packing group	II
Environmental hazards	
Marine pollutant	No.
Special precautions for user	Not assigned.
Special provisions	B2, IB2, T11, TP1, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA	
UN number	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s.
Transport hazard class(es)	
Class	8

Subsidiary hazard	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Not assigned.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S.
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Not assigned.

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.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern

Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7) Bisphenol A Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

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
 Reproductive toxicity

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Phenol, 4,4'-(1-methylethylidene)bis-	80-05-7	0 - 20

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Phenol, 4,4'-(1-methylethylidene)bis- (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. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7)

California Proposition 65

WARNING: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Developmental toxin

Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7) Listed: December 18, 2020

California Proposition 65 - CRT: Listed date/Female reproductive toxin

Phenol, 4,4'-(1-methylethylidene)bis- (CAS 80-05-7) Listed: May 11, 2015

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	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**Issue date** 04-12-2019

Revision date	07-11-2024
Version #	06
Further information	HMIS® is a registered trade and service mark of the NPCA.
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
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: Alternate Trade Names Hazard(s) identification: Prevention Hazard(s) identification: Hazard statement Handling and storage: Conditions for safe storage, including any incompatibilities Physical & Chemical Properties: Multiple Properties Toxicological information: Skin contact GHS: Classification