

# Safety Data Sheet

Revision Date 03.24.2016

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## 1 Identification of the substance/mixture and the company/undertaking

### 1.1 Product identifier

Trade name: Armor-Hard Extreme

Article number: Armor-Hard Extreme Part A

### 1.2 Application of the substance / the mixture: Epoxy binder

### 1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:

Metzger/McGuire Co.

P. O. Box 2217

Concord, NH 03302

Telephone: (800) 223-6680

### 1.4 Emergency telephone number:

(800) 255-3924 24 hrs. (Continental U.S.)

(813) 248-0585 24 hrs. (Outside Continental U.S.)

## 2 Hazards identification

### 2.1 GHS Classification of the substance or mixture

Acute toxicity- Dermal: Category 4

Skin corrosion/Irritant; Category 1

Skin sensitization; Category 1

Serious eye damage/Irritant, Category 2

### 2.2 GHS Label elements

#### Hazard pictograms/symbols



Signal word: Danger

#### Hazard statements:

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

#### Precautionary statements:

P261: Avoid breathing gas/mist/vapours/spray.

P264: Wash skin thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

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P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER or doctor/ physician.  
P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.  
P363: Wash contaminated clothing before reuse.

## Additional information:

Contains epoxy constituents. May produce an allergic reaction.

## HMS Rating:

Health: 3  
Flammability: 1  
Physical Hazard: 0

## 3 Composition/information on ingredients

### 3.2 Mixture

**Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 25068-38-6	Reaction product: bisphenol - A- (epichlorhydrin) epoxy resin (number average molecular weight<700)	60-90%
Trade Secret	Aliphatic Acrylic Ester	10-30%

In conformity with 29CFR 1910.1200(i) the specific chemical identity may be withheld as Trade Secret, while all health/safety properties and effects are included in the SDS.

## 4 First aid measures

### 4.1 Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

**After inhalation:** If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately

**After skin contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### After eye contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. Call a Poison Control Center.

#### After swallowing:

If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Rinse mouth.

### 4.2 Most important symptoms and effects, both acute and delayed:

Allergic reactions.

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Nausea.  
Coughing.  
Gastric or intestinal disorders.  
Irritant to skin and mucous membranes.  
Irritant to eyes.

#### 4.3 Indication of any immediate medical attention and special treatment needed:

Contains reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq 700$ ), Reaction May produce an allergic reaction.  
If necessary oxygen respiration treatment.

## 5 Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing agents:

Water haze or fog.  
Foam.  
Fire-extinguishing powder.  
Carbon dioxide.

#### For safety reasons unsuitable extinguishing agents:

Water with full jet  
Water spray

### 5.2 Special hazards arising from the substance or mixture:

Formation of toxic gases is possible during heating or in case of fire.

### 5.3 Advice for the firefighters

#### Protective equipment:

Wear self-contained respiratory protective device.  
Wear fully protective suit.

#### Additional information:

Cool endangered receptacles with water fog or haze.  
Eliminate all ignition sources if safe to do so.

## 6 Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Use respiratory protective device against the effects of fumes/dust/aerosol.  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Keep away from ignition sources.

### 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.  
Inform respective authorities in case of seepage into water course or sewage system.  
Prevent from spreading (e.g. by damming-in or oil barriers).

### 6.3 Methods and material for containment and cleaning up:

Absorb liquid components with liquid-binding material.  
Send for recovery or disposal in suitable receptacles.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 7 Handling and storage

### 7.1 Precautions for safe handling:

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Use only in well-ventilated areas.

Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

## 7.2 Conditions for safe storage, including any incompatibilities:

Use only receptacles specifically permitted for this substance/product.

Avoid storage near extreme heat, ignition sources or open flame.

Store separate from: Strong oxidizing agents, strong reducing agents, free radical generators and peroxides.

## Further Information about storage conditions:

Keep container tightly sealed.

Store in an area with adequate ventilation.

## 8 Exposure controls/personal protection

### 8.1 Control parameters

Permissible Exposure Limits (PELs): NA

Threshold Limit Values (TLVs): N.A.

### 8.2 Engineering controls

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

### 8.3 Personal protective equipment

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

#### Respiratory protection:

Not required under normal conditions of use.

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components.

#### Hand protection:

Protective, impervious gloves. (Neoprene, Butyl-rubber, Nitrile rubber)

The glove material has to be impermeable and resistant to the product / the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Eye protection:

Face shield with safety glasses or goggles underneath.

Contact lenses should not be worn.

#### Skin and Body protection:

Protective work clothing.

Where potential exposure warrants, rubber or plastic boots and chemically resistant protective suit.

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## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance

Form:	Liquid
Colour:	Colorless
Odour:	Sweet-Acrylic like
Odour threshold:	No data available
pH:	No data available
Melting point/range:	No data available
Boiling point/range:	No data available
Flash point:	>201 °F / >94 °C
Evaporation rate:	No data available
Flammability (solid, gaseous):	Not applicable
Upper/lower flammability or explosive limit:	Not applicable
Vapor pressure:	No data available
Vapor density:	No data available
Relative Density at 20°C:	1.15g/cm <sup>3</sup>
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	No data available
Auto/Self-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity	900 – 1,400 cps

## 10 Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions:

Reacts with strong alkali.

Exothermic polymerization.

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Reacts with strong acids and oxidizing agents.

Reacts with catalysts.

#### 10.4 Conditions to avoid:

This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat.

#### 10.5 Incompatible materials:

Strong acids, bases and oxidizing agents.

#### 10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide. Acrylates. Hazardous organic compounds.

## 11 Toxicological information

#### 11.1 Information on likely routes of exposure:

Inhalation: May cause respiratory irritation  
Ingestion: No data available  
Skin contact: May cause skin damage. May cause an allergic skin reaction.  
Eye contact: May cause serious eye damage.

#### 11.2 Symptoms related to physical, chemical and toxicological characteristics: No available data

#### 11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:

(Data for primary component, Reaction product: bisphenol - A- (epichlorhydrin) epoxy resin)

Acute toxic:

Oral	LD50 > 2,000 mg/kg (rat)
Dermal	LD50 > 2,000 mg/kg (rat)
Inhalation	No data

Skin Corrosive/Irritant:

Test material was slightly irritating to skin in key studies. For the skin, mean erythema and edema scores were 0.8 and 0.5 respectively.

Serious eye damage/eye irritation:

Test material was slightly irritating to the eye in key studies. The mean eye score was 0.4

Respiratory sensitization: No data available

Skin sensitization:

In a local lymph node assay, the concentration that would cause a 3-fold increase in proliferation (EC-3) was calculated to be 5.7% which is consistent with moderate dermal sensitization potential.

#### 11.4 Numerical measures of toxicity: No data available for mixture.

#### Additional toxicological information:

The product show the following dangers according to the calculation method of the General EU

Classification Guidelines for Preparations as issued in the latest version: Irritant

Danger through skin absorption.

Toxic and /or corrosive effects may be delayed up to 24 hours.

Inhalation of concentrated vapours as well as oral intake will lead to anesthesia-like conditions and headache, dizziness ,etc.

## 12 Ecological information

#### 12.1 Toxicity

**Aquatic toxicity:** No data for the complete mixture itself.

(Data for primary component, Reaction product: bisphenol - A- (epichlorhydrin) epoxy resin)

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Fish	96hr-LC50 = 3.6mg/L test mat. <i>Oncorhynchus mykiss</i> (direct application, nominal) (OECD Guideline 203) LC50 1.41 mg/L 96hr <i>Oryzias latipes</i>
Crustacea	48hr-EC50 = 2.8mg/L test mat <i>Daphnia magna</i> (direct application, nominal, based on: mobility) (OECD Guideline 202) EC50 1.7mg/L 48hr
Aquatic Plant	72hr-EC50 > 11 mg/L <i>Scenedesmus capricornutum</i> water soluble fraction (meas. (arithm. mean)) based on: growth rate (EPA-660/3-75-009)

**12.2 Persistence and degradability:** No data available.

**12.3 Bioaccumulative Las Vegas (and vicinity), Nevada, United States of America potential:** No further relevant information available.

**12.4 Mobility in soil:** No further relevant information available.

**12.5 Results of PBT and vPvB assessment:**

PBT: Not applicable.

vPvB: Not applicable.

**12.6 Other adverse effects:** No further relevant information available

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Waste from residue/unused product:

This product should not be allowed to enter drains, water courses or the soil. Dispose of this material in a safe manner and in accordance with federal, state and local regulations

#### Contaminated packaging:

Disposal must be made in accordance with official federal, state and local regulations.

## 14 Transport information

### DOT

UN number: Not Regulated

### IATA

UN number: Not Regulated

### IMDG

UN number: Not Regulated

### TDG

UN number: Not Regulated

## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

United States (USA)

#### SARA

Section 355 (extremely hazardous substances):

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None of the ingredients is listed.
<b>Section 313 (Specific toxic chemical listings):</b>
Component(s) above 'de minimus' level: Cyclohexane (110-82-7), Toluene (108-88-3)
<b>TSCA (Toxic Substances Control Act):</b>
All the ingredients are listed.

## Proposition 65 (California):

<b>Chemicals known to cause birth defects or other reproductive harm:</b> Toluene (108-88-3), residual only
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## Canada

<b>Canadian Domestic Substances List (DSL):</b>
All ingredients are listed.
<b>Canadian Ingredient Disclosure list (limit 0.1%)</b>
None of the ingredients is listed.
<b>Canadian Ingredient Disclosure list (limit 1%)</b>
None of the ingredients is listed.

**15.2 Chemical Safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Abbreviation and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienist.  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substance  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)