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

1.1 Product identifier
Trade name: Steel – Extra Fast Armor Plate Resin

1.2 Application of the substance / the mixture: Repair epoxy

1.3 Details of the supplier of the Safety Data Sheet
Manufacturer/Supplier:

Coppes Industries, Inc.
10500 N Commerce Street
Mequon, WI  53092
Phone: (262) 238-1700

1.4 Emergency telephone number:
ChemTel Inc.
(800) 255-3924, +1 (813) 248-0585

2 Hazards identification

2.1 GHS Classification of the substance or mixture
Skin Irritant 2; H315: Causes skin irritation.
Eye Irritant 2; H319: Causes serious eye irritation.
Skin Sensitizer 1; H317: May cause an allergic skin reaction.

2.2 GHS Label elements
Hazard pictograms/symbols

Signal word: Warning

Hazard statements:
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.

Precautionary statements:
P280: wear protective gloves / eye protection.
P273: Avoid release to the environment.
P264: Wash thoroughly after handling.
P261: Avoid breathing mist/vapours/spray.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.

Additional information: Contains epoxy constituents. May produce an allergic reaction.

HMIS Rating:
Health: 2
Flammability: 1
Physical Hazard: 0
3 Composition/information on ingredients

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

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 25068-38-6</td>
<td>Reaction product: bisphenol - A- (epichlorhydrin) epoxy resin (number average molecular weight&lt;700)</td>
</tr>
<tr>
<td>CAS: 7439-89-6</td>
<td>Iron Metal, Powder</td>
</tr>
</tbody>
</table>

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: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately rinse with water. If skin irritation continues, consult a doctor.
After eye contact: Remove contact lenses if worn, if possible. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed: Allergic reactions, 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 < 700). May produce an allergic reaction. If necessary oxygen respiration treatment. Later observation for pneumonia and pulmonary edema. Medical supervision for at least 48 hours.

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

6.2 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: Use only in well-ventilated areas. Store in cool, dry place in tightly closed receptacles.
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.
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
Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
DNELs: No further relevant information available.
PNECs: No further relevant information available.
Additional information: The lists valid during the making were used as basis.

8.2 Engineering controls
Provide readily accessible eye wash stations and safety showers. Provide ventilation adequate to ensure concentrations are minimized.

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. Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable. Use respiratory protection when grinding or cutting material.
Hand protection: Protective, impervious gloves. (Neoprene, PVC, 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: Safety glasses with side shields. 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.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance
Form: Thick Paste
Colour: Dark Gray
Odour: Sweet
Odour threshold: No data available
pH: No data available
Melting point/range: No data available
Boiling point/range: >392 °F / >200 °C
Flash point: >200 °F / >93 °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: 2.36 g/cm³
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 Thick paste

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.
10.4 Conditions to avoid: Avoid contact with strong oxidizing agents, excessive heat or flames.
10.5 Incompatible materials: Strong acids, bases and oxidizing agents.
10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

11 Toxicological information

11.1 Information on likely routes of exposure:
- Inhalation: May cause respiratory irritation
- Ingestion: No data
- Skin contact: May cause skin irritation
- Eye contact: May cause eye irritation

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

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

11.5 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.

11.6 Serious eye damage/eye irritation:
- Test material was slightly irritating to the eye in key studies. The mean eye score was 0.4

11.7 Respiratory sensitization: No data available

11.8 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.

12 Ecological information

12.1 Toxicty
Aquatic toxicity:
(Data taken from SDS of primary component, Reaction product: bisphenol - A- (epichlorhydrin) epoxy resin)
- Fish: 96hr-LC50 = 3.6mg/L test mat. Oncorhynchus mykiss (direct application, nominal) (OECD Guideline 203)
- LC50 1.41 mg/L 96hr Oryzias latipes
- Crustacea: 48hr-EC50 = 2.8mg/L test mat Daphnia magna (direct application, nominal, based on: mobility) (OECD Guideline 202)
- EC50 1.7mg/L 48hr
- Aquatic Plant: 72hr-EC50 > 11 mg/L Scenedesmus capricornutum 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 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

<table>
<thead>
<tr>
<th>DOT</th>
<th>UN number: Not Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>UN number: Not Regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>UN number: Not Regulated</td>
</tr>
<tr>
<td>TDG</td>
<td>UN number: Not Regulated</td>
</tr>
</tbody>
</table>

## 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):** None of the ingredients is listed.
- **Section 313 (Specific toxic chemical listings):** Component(s) above 'de minimus' level: None
- **TSCA (Toxic Substances Control Act):** All the ingredients are listed.

**Proposition 65 (California):**

- **Chemicals known to cause cancer or reproductive toxicity:** Ethylene glycol

**Canada**

- **Canadian Domestic Substances List (DSL):** All ingredients are listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** None of the ingredients is listed.
- **Canadian Ingredient Disclosure list (limit 1%)** 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)
1 Identification of the substance/mixture and the company/undertaking

1.1 Product identifier
Trade name: Steel – Extra Fast Armor Plate Hardener

1.2 Application of the substance / the mixture: Wearing epoxy compound

1.3 Details of the supplier of the Safety Data Sheet
Manufacturer/Supplier:

Copps Industries, Inc.
10500 N Commerce Street
Mequon, WI 53092
Phone: (262) 238-1700

1.4 Emergency telephone number:
ChemTel Inc.
(800) 255-3924, +1 (813) 248-0585

2 Hazards identification

2.1 GHS Classification of the substance or mixture
Skin Irritant 2; H315: Causes skin irritation.
Eye Irritant 2; H319: Causes serious eye irritation.

2.2 GHS Label elements
Hazard pictograms/symbols

Signal word: Warning

Hazard statements:
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statements:
P280: wear protective gloves / eye protection.
P264: Wash thoroughly after handling.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.

Additional information: None known.

HMIS Rating:
Health: 2
Flammability: 1
Physical Hazard: 0

3 Composition/information on ingredients

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

Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>2,4,6-Tris(dimethylaminomethyl)phenol</th>
<th>3-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-72-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 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:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately rinse with water. If skin irritation continues, consult a doctor.

**After eye contact:** Remove contact lenses if worn, if possible. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Rinse out mouth and then drink plenty of water. Do not Induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed: Allergic reactions, 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: None known.

### 5 Firefighting measures

5.1 Extinguishing media


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


Additional information: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides

### 6 Accidental release measures


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: 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.

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

**Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**DNELs:** No further relevant information available.

**PNECs:** No further relevant information available.

**Additional information:** The lists valid during the making were used as basis.

8.2 Engineering controls Provide readily accessible eye wash stations and safety showers. Provide ventilation adequate to ensure concentrations are minimized.

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.
**Safety Data Sheet**

**Respiratory protection:** Not required under normal conditions of use. Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable. Use respiratory protection when grinding or cutting material.

**Hand protection:** Protective, impervious gloves. (Neoprene, PVC, 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:** Safety glasses with side shields. 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.

---

### 9 Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

**General Information**

**Appearance**
- **Form:** Paste
- **Colour:** Off-White
- **Odour:** Mercaptan-like odor
- **Odour threshold:** No data available
- **pH:** No data available
- **Melting point/range:** No data available
- **Boiling point/range:** >392 °F / >200 °C
- **Flash point:** >200 °F / >93 °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:** 1.83 g/cm³
- **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:** Paste

### 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.
- Reacts with strong acids and oxidizing agents. Reacts with catalysts.

#### 10.4 Conditions to avoid:
Avoid contact with strong oxidizing agents, excessive heat or flames.

#### 10.5 Incompatible materials:
- Strong acids, bases and oxidizing agents.

#### 10.6 Hazardous decomposition products:
- Carbon monoxide and carbon dioxide.

### 11 Toxicological information

#### 11.1 Information on likely routes of exposure:
- **Inhalation:** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Ingestion:** No data
- **Skin contact:** May cause skin irritation
- **Eye contact:** May cause eye irritation

#### 11.2 Symptoms related to physical, chemical and toxicological characteristics:
- No known significant effects or critical hazards.
11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure: No known significant effects or critical hazards.

11.4 Numerical measures of toxicity: No data available for mixture.
Additional toxicological information: No data available for mixture.

12 Ecological information

12.1 Toxicity
Aquatic toxicity:
No further relevant information available.
12.2 Persistence and degradability: No data available.
12.3 Bioaccumulative 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):
None of the ingredients is listed.
Section 313 (Specific toxic chemical listings):
Component(s) above ‘de minimus’ level: None
TSCA (Toxic Substances Control Act):
All the ingredients are listed.
Proposition 65 (California):
Chemicals known to cause cancer: None

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