

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

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

- **1.1 Product identifier**
- **Trade name: Armor-Hard Part A**
- **Product code:** No other identifiers
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture:** Epoxy binder
- **Uses advised against:** No further relevant information available.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
METZGER/McGUIRE  
Mailing Address:  
PO Box 2217  
Concord, NH 03302  
Shipping Address:  
807 Route 3-A  
Bow, NH 03304  
Phone: 603-224-6122  
Toll Free: 800-223-6680  
Email: info@metzgermcguire.com
- **Importer / Distributor:**  
DR. Schulze GmbH  
Bollenberg 10  
D-57234 Wilnsdorf  
+49 (0) 2737/5953-0
- **1.4 Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Skin Irrit. 2		H315 Causes skin irritation.
Eye Irrit. 2		H319 Causes serious eye irritation.
Skin Sens. 1		H317 May cause an allergic skin reaction.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

---

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS09

(Cont'd. on page 2)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 1)

- **Signal word** Warning
  - **Hazard-determining components of labelling:**  
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane  
[[[(2-ethylhexyl)oxy]methyl]oxirane
  - **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.
  - **Precautionary statements**  
P261 Avoid breathing mist/vapors/spray.  
P264 Wash thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / eye protection / face protection.  
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.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
  - **Additional information:**  
Contains epoxy constituents. May produce an allergic reaction.  
Restricted to professional users.
- 
- **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### · 3.2 Mixtures

##### · Components:

CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 Reg.nr.: 01-2119456619-26-XXXX	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane ----- ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	60-90%
CAS: 2461-15-6 EINECS: 219-553-6	[[[(2-ethylhexyl)oxy]methyl]oxirane ----- ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	10-20%

- **Additional information:** For the wording of the listed Hazard Statements refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**  
Supply fresh air; consult doctor in case of complaints.  
Provide oxygen treatment if affected person has difficulty breathing.

(Cont'd. on page 3)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 2)

- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation or rash occurs: Get medical advice/attention.
- **After eye contact:**  
Remove contact lenses if worn.  
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**  
Coughing  
Dizziness  
Breathing difficulty  
Allergic reactions  
Gastric or intestinal disorders when ingested.  
Nausea in case of ingestion.  
Irritant to skin and mucous membranes.  
Causes eye irritation.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Contains 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, [[(2-ethylhexyl)oxy]methyl]oxirane. May produce an allergic reaction.  
Medical supervision for at least 48 hours.  
Later observation for pneumonia and pulmonary oedema.  
Treat symptomatically.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Water haze or fog
- **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 firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information:** Cool endangered receptacles with water fog or haze.

### SECTION 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
- **6.2 Environmental precautions**  
Do not allow to enter sewers/ surface or ground water.

(Cont'd. on page 4)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 3)

Inform respective authorities in case of seepage into water course or sewage system.

- **6.3 Methods and material for containment and cleaning up**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Send for recovery or disposal in suitable receptacles.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Use only in well ventilated areas.  
Prevent formation of aerosols.  
Avoid splashes or spray in enclosed areas.

- **Information about fire - and explosion protection:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

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

- **Information about storage in one common storage facility:**

Store away from foodstuffs.  
Store away from oxidisers, strong acids, strong bases.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.  
Keep container tightly sealed.

- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 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.

- **8.2 Exposure controls**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid breathing mist/vapours/spray.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

Wear appropriate NIOSH or EU approved respirator when ventilation is inadequate and occupational

(Cont'd. on page 5)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 4)

exposure limits are exceeded.

**Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**Eye protection:**


Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

**Body protection:** Protective work clothing

**Limitation and supervision of exposure into the environment:**

No further relevant information available.

### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**
**Appearance**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless

<b>Odour:</b>	Sweet
---------------	-------

<b>Odour threshold:</b>	Not determined.
-------------------------	-----------------

<b>pH-value:</b>	Not determined.
------------------	-----------------

<b>Melting point/freezing point:</b>	Not determined.
--------------------------------------	-----------------

<b>Initial boiling point and boiling range:</b>	>200 °C
---	---------

<b>Flash point:</b>	>150 °C (Open Cup)
---------------------	--------------------

<b>Flammability (solid, gas):</b>	Not applicable.
-----------------------------------	-----------------

<b>Auto/Self-ignition temperature:</b>	Not determined.
--	-----------------

<b>Decomposition temperature:</b>	Not determined.
-----------------------------------	-----------------

<b>Explosive properties:</b>	Product does not present an explosion hazard.
------------------------------	---

**Explosion limits**

<b>Lower:</b>	Not determined.
---------------	-----------------

<b>Upper:</b>	Not determined.
---------------	-----------------

<b>Oxidising properties</b>	Not determined.
-----------------------------	-----------------

<b>Vapour pressure:</b>	Not determined.
-------------------------	-----------------

<b>Density at 20 °C:</b>	1,12 g/cm <sup>3</sup>
--------------------------	------------------------

<b>Relative density:</b>	Not determined.
--------------------------	-----------------

<b>Vapour density:</b>	Not determined.
------------------------	-----------------

<b>Evaporation rate:</b>	Not determined.
--------------------------	-----------------

<b>Solubility in / Miscibility with</b>	
---	--

(Cont'd. on page 6)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 5)

<b>water:</b>	Not miscible or difficult to mix.
---------------	-----------------------------------

· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
--	-----------------

· <b>Viscosity</b>	
--------------------	--

<b>Dynamic at 20 °C:</b>	900-1400 cps
--------------------------	--------------

<b>Kinematic:</b>	Not determined.
-------------------	-----------------

· <b>9.2 Other information</b>	No further relevant information available.
--------------------------------	--

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Toxic fumes may be released if heated above the decomposition point.  
Exothermic polymerisation.  
Reacts with catalysts, oxidising agents and strong alkali.  
Reacts with strong acids.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials** Oxidisers, strong bases, strong acids
- **10.6 Hazardous decomposition products**  
Carbon monoxide and carbon dioxide  
Chlorine compounds

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· <b>LD/LC50 values relevant for classification:</b>	
--	--

<b>25068-38-6 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</b>
--

Oral	LD50	>2.000 mg/kg (rat, female)
------	------	----------------------------

Dermal	LD50	>2.000 mg/kg (rat)
--------	------	--------------------

- **Primary irritant effect**
- **Skin corrosion/irritation:**  
Causes skin irritation.
- **Serious eye damage/irritation:**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation:**  
May cause an allergic skin reaction.

· <b>IARC (International Agency for Research on Cancer):</b>	
--	--

None of the ingredients are listed.
-------------------------------------

· <b>Probable routes of exposure:</b>	
---------------------------------------	--

(Cont'd. on page 7)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 6)

Ingestion.  
 Inhalation.  
 Eye contact.  
 Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
 Toxic to aquatic life with long lasting effects.

#### 25068-38-6 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

EC50	2,7 mg/kg (daphnia) (48hr)
LC50	1,2 mg/l (Oncorhynchus mykiss) (96hr) 2,4 mg/l (zebra fish) (96hr)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Do not allow product to reach ground water, water course or sewage system.  
 Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.  
 The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:**  
 Disposal must be made according to official regulations.

(Cont'd. on page 8)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 7)

 Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Packagings that may not be cleansed are to be disposed of in the same manner as the product.

### SECTION 14: Transport information

**· 14.1 UN-Number**

· DOT Not Regulated  
 · ADR, IMDG, IATA UN3082

**· 14.2 UN proper shipping name**

· DOT Not Regulated  
 · ADR, IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane)

**· 14.3 Transport hazard class(es)**

· DOT Not Regulated  
 · Class

## · ADR



· Class 9 (M6) Miscellaneous dangerous substances and articles.  
 · Label 9

## · IMDG, IATA



· Class 9 Miscellaneous dangerous substances and articles.  
 · Label 9

**· 14.4 Packing group**

· DOT Not Regulated  
 · ADR, IMDG, IATA III

**· 14.5 Environmental hazards:**

Product contains environmentally hazardous substances: 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

**· Marine pollutant:**


Yes

(Cont'd. on page 9)



## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 8)

<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> </ul>	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F
<ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Remarks:</b></li> </ul>	Not regulated when carried in single or combination packaging containing a net quantity of 5 L or less for liquids or 5 kg or less for solids per the following: DOT: 171.4(c)(2) ADR: SP 375 IMDG: 2.10.2.7 IATA: special provision A197  Transport labeling is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Transport category</b></li> </ul>	3

### SECTION 15: Regulatory information

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

- **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients are listed.

- **National regulations:**

- **Water hazard class:** Water hazard class 2: hazardous for water.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

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

### SECTION 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.

(Cont'd. on page 10)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 21 February 2018

Revision: 21 February 2018

**Trade name: Armor-Hard Part A**

(Cont'd. from page 9)

**· Relevant phrases**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

**· Abbreviations and acronyms:**

- LDLo: Lowest Lethal Dose Observed
- 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 Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bio-accumulable, Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

**· Sources**

- Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))
- Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))
- Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))
- Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
- Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
- Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: [www.chemtelinc.com](http://www.chemtelinc.com)