

## SAFETY DATA SHEET (GLASS ARMOR™)

### SECTION I. IDENTIFICATION

**PRODUCT NAME:** Glass Armor™ ;

**CHEMICAL FAMILY:** DIGLYCIDYL ETHER BISPHENOL-A & EPOXY NOVOLAC RESINS.

**PRODUCT TYPE:** LIQUID EPOXY RESIN  
 CAS#. 25068-38-6, CAS#. 028064-14-4

**MANUFACTURER:** Bridgeport Chemical  
 291 West Mc Callen  
 Sikeston, MO 63801  
 Phone: 800-676-8265 or 573-472-9700

**EMERGENCY CONTACT:** (800) 424-9300 CHEMTREC

**RECOMMENDED USE:** GA IS RECOMMENDED AS A COATING/LINING FOR CORROSION PROTECTION AND LEAK PREVENTION FOR STORAGE TANKS, PROCESS VESSELS AND OTHER CONTAINMENT STRUCTURES

**IMPORTANT RESTRICTIONS ON USE:** THIS MATERIAL WILL NOT BE SOLD FOR USE IN PRODUCTS FOR WHICH PROLONGED CONTACT WITH MUCOUS MEMBRANES, ABRADED SKIN, OR IMPLANTATION WITHIN THE HUMAN BODY IS SPECIFICALLY INTENDED. BECAUSE OF THE WIDE RANGE OF SUCH POTENTIAL USES, BRIDGEPORT CHEMICAL LLC IS NOT ABLE TO RECOMMEND THIS MATERIAL AS SAFE AND EFFECTIVE FOR SUCH USES AND ASSUMES NO LIABILITY FOR ANY SUCH USES.

**HAZARD STATEMENT:** THIS SAFETY DATA SHEET (SDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200. THIS PRODUCT IS CONSIDERED TO BE A HAZARDOUS CHEMICAL UNDER THAT STANDARD.

### SECTION II. HAZARDOUS IDENTIFICATION

#### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Skin corrosion/irritation	Category 2	H315	Causes skin irritation
Skin sensitization	Category 1B	H317	May cause allergic skin reaction
Serious eye damage/eye irritation	Category 2	H319	Causes serious eye irritation
Chronic aquatic toxicity	Category 2	H411	Toxic to aquatic life with long Lasting effects

#### LABEL ELEMENTS

**Hazard Pictograms:**



**Signal Word:** Warning

**Hazard Statements:**

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

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## Precautionary Statements:

- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P273 Avoid releases to the environment
- Do not breath vapors
- Do not eat, drink or smoke when using this product
- Wash hands 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
- P302 +P352 IF ON SKIN – Wash with plenty of soap and water
- P391 Collect spillage
- P501 Dispose of in accordance with all governmental regulations

Other Hazards – No information available

## SECTION III. COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE – 100%

THIS PRODUCT IS A PROPRIETARY BLEND MIXTURE

**SPECIFIC CHEMICAL NAME:** PHENOL 4,4'-(METHYLETHYLIDENE) BISPOLYMER WITH (CHLOROMETHYL) OXIRANE) – 10%-90%

**COMMON NAME:** BISPHENOL-A EPOXY RESIN

CAS#. 25068-38-6

### EXPOSURE LIMITS:

OSHA PEL - NOT ESTABLISHED

ACGIH TLV - NOT ESTABLISHED

CARCINOGENICITY: THIS CHEMICAL IS NOT CONSIDERED TO BE A CARCINOGENIC BY NTP., IARC, OR OSHA.

**SPECIFIC CHEMICAL NAME:** BISPHENOL-F (EPICHLOROHYDRIN TYPE) EPOXY RESIN

**COMMON NAME:** BISPHENOL-F EPOXY RESIN – 10%-90%

CAS#. 028064-14-4

### EXPOSURE LIMITS:

OSHA PEL - NOT ESTABLISHED

ACGIH TLV - NOT ESTABLISHED

CARCINOGENICITY: THIS CHEMICAL IS NOT CONSIDERED TO BE A CARCINOGENIC BY NTP., IARC, OR OSHA.

## SECTION IV. FIRST AID MEASURES

### GENERAL PRECAUTIONS FOR RESPONDERS

**PROTECTIVE GLOVES:** WEAR IMPERVIOUS GLOVES.

**EYE PROTECTION:** WEAR SPLASH-PROOF CHEMICAL RESISTANT GOGGLES.

**RESPIRATORY PROTECTION:** USE OSHA, NIOSH APPROVED AMINE ORGANIC CARTRIDGE VAPOR RESPIRATOR.

**OTHER PROTECTIVE EQUIPMENT:** WEAR PROTECTIVE EQUIPMENT TO PREVENT EXPOSURE AND PERSONAL CONTACT.

### DESCRIPTION OF FIRST AID MEASURES

**EYES -** FOR EYE CONTACT, IMMEDIATELY FLUSH EYES FOR AT LEAST FIFTEEN MINUTES WITH RUNNING WATER. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE EYE

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SURFACE AND LIDS WITH WATER. IF PHYSICIAN IS NOT AVAILABLE, FLUSH FOR AN ADDITIONAL FIFTEEN MINUTES. GET IMMEDIATE MEDICAL ATTENTION.

SKIN - FOR SKIN CONTACT, IMMEDIATELY REMOVE CONTAMINATED CLOTHING AND SHOES UNDER A SAFETY SHOWER. WASH AFFECTED AREAS THOROUGHLY WITH PLENTY OF WATER AND SOAP FOR AT LEAST FIFTEEN MINUTES. DISCARD OR DECONTAMINATE CLOTHING BEFORE RE-USE, AND DESTROY CONTAMINATED SHOES.

INGESTION - IF SWALLOWED, GET IMMEDIATE MEDICAL ATTENTION.

INHALATION - IF INHALED, REMOVE FROM AREA TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION IF BREATHING IS DIFFICULT, TRANSPORT TO MEDICAL CARE AND, IF AVAILABLE, GIVE SUPPLEMENTAL OXYGEN.

OTHER - PROMPTLY REMOVE CONTAMINATED NON-IMPERVIOUS CLOTHING. WASH BEFORE RE-USE.

### MOST IMPORTANT SYMPTOMS AND EFFECTS – ACUTE AND CHRONIC

ADDITIONAL IMPORTANT SYMPTOMS AND EFFECTS ARE DESCRIBED IN SECTION XI: TOXICOLOGICAL INFORMATION.

### INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

THERE IS NO SPECIFIC ANTIDOTE TO EXPOSURE. TREATMENT OF EXPOSURES SHOULD FOCUS ON THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITION OF THE EXPOSED INDIVIDUAL.

## SECTION V. FIRE-FIGHTING MEASURES

FLASHPOINT: > 150 °F.

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL, AND WATER SPRAY.

SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC.

## SECTION VI. ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE: ISOLATE HAZARD AREA AND KEEP UNNECESSARY PEOPLE AWAY.

PROTECT THE ENVIRONMENT: KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL. FOR LARGE SPILLS CONTAIN WITH A DIKE AND EVACUATE UPWIND.

CLEAN-UP PROCEDURES: AVOID ALL PERSONAL CONTACT, VENTILATE AREA, AND ELIMINATE ALL SOURCES OF IGNITION. COMPLETE PERSONAL PROTECTIVE EQUIPMENT MUST BE USED DURING CLEANUP. USE AN ABSORBENT MATERIAL (SUCH AS SAND OR DRY SOIL) TO PICK-UP RESIDUE AND SHOVEL INTO A CLOSEABLE CONTAINER. FLUSH CONTAMINATED AREA WITH WATER SPRAY.

WASTE DISPOSAL METHODS: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL

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REGULATIONS.

## SECTION VII. HANDLING AND STORAGE

**HANDLING AND STORING PRECAUTIONS:** WARNING! HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH THE SKIN. MAY CAUSE IRRITATION AND SENSITIZATION. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. DO NOT BREATHE VAPOR, MIST, OR SPRAY. GOOD VENTILATION AND PERSONAL HYGIENE ARE ESSENTIAL. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE AWAY FROM FOOD, FOOD CONTAINERS, AND CLOTHING. STORE BELOW 100°F. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

## SECTION VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE CONTROLS

**VENTILATION:** GOOD GENERAL MECHANICAL VENTILATION AND LOCAL EXHAUST IS REQUIRED.

**PROTECTIVE GLOVES:** WEAR IMPERVIOUS GLOVES.

**EYE PROTECTION:** WEAR SPLASH-PROOF CHEMICAL RESISTANT GOGGLES.

**RESPIRATORY PROTECTION:** USE OSHA, NIOSH APPROVED AMINE ORGANIC CARTRIDGE VAPOR RESPIRATOR.

**OTHER PROTECTIVE EQUIPMENT:** WEAR PROTECTIVE EQUIPMENT TO PREVENT EXPOSURE AND PERSONAL CONTACT.

### EXPOSURE LIMITS

#### CHEMICAL NAME

PHENOL 4,4'-(METHYLETHYLIDENE)  
BISPOLYMER WITH (CHLOROMETHYL) OXIRANE)  
**COMMON NAME:** BISPHENOL-A EPOXY RESIN  
CAS#. 25068-38-6

#### EXPOSURE LIMITS

OSHA PEL - NOT ESTABLISHED  
ACGIH TLV - NOT ESTABLISHED  
CARCINOGENICITY: THIS CHEMICAL IS  
NOT CONSIDERED TO BE A  
CARCINOGENIC BY NTP., IARC, OR  
OSHA.

#### CHEMICAL NAME

BISPHENOL-F (EPICHLOROHYDRIN TYPE)  
EPOXY RESIN  
**COMMON NAME:** BISPHENOL-F EPOXY RESIN  
CAS#. 028064-14-4

#### EXPOSURE LIMITS

OSHA PEL - NOT ESTABLISHED  
ACGIH TLV - NOT ESTABLISHED  
CARCINOGENICITY: THIS CHEMICAL IS  
NOT CONSIDERED TO BE A  
CARCINOGENIC BY NTP., IARC, OR  
OSHA.

## SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR:** BLUE, THIXOTROPIC LIQUID, MODERATE ODOR.

**ODOR THRESHOLD:** NO TEST DATA AVAILABLE

**DECOMPOSITION TEMP:** > 150 °F

**PERCENT VOLATILE:** > 0

**SOLUBILITY IN WATER:** INSOLUBLE

**DENSITY:** > 12.5 POUNDS PER GALLON

**MATERIAL pH:** NOT APPLICABLE

**MELTING POINT:** NOT APPLICABLE

**FREEZING POINT:** NO TEST DATA AVAILABLE

**BOILING POINT:** >150 °F

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EVAPORATION RATE: NO TEST DATA AVAILABLE

VAPOR DENSITY: NOT APPLICABLE

## SECTION X. STABILITY AND REACTIVITY

STABILITY: STABLE

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS AND ACIDS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND/OR CARBON DIOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITIONS TO AVOID: MASSES OF 1LB OR MORE PLUS AMINES WILL CAUSE AN IRREVERSIBLE POLYMERIZATION WITH CONSIDERABLE HEAT BUILD UP. STRONG ACIDS OR BASES.

## SECTION XI. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

**INGESTION** – VERY LOW TOXICITY IF SWALLOWED. SMALL AMOUNTS SWALLOWED INCIDENTALLY ARE UNLIKELY TO CAUSE INJURY. SWALLOWING LARGE AMOUNTS MAY CAUSE INJURY.

**ASPIRATION HAZARD** – UNLIKELY TO BE AN ASPIRATION HAZARD

**SKIN ABSORPTION** – PROLONGED SKIN CONTACT IS UNLIKELY TO PRODUCE TOXIC EFFECTS DUE TO ABSORPTION

**INHALATION** – AT ROOM TEMPERATURE, EXPOSURE TO VAPOR IS MINIMAL DUE TO LOW VOLATILITY. WHEN HEATED, VAPORS, MISTS OR AEROSOLS MAY CAUSE RESPIRATORY IRRITATION

**EYE DAMAGE/IRRITATION** – MAY CAUSE MODERATE EYE IRRITATION

**SKIN CORROSION/IRRITATION** – BRIEF CONTACT MAY CAUSE LOCAL REDNESS AND IRRITATION

**SENSITIZATION** – MATERIAL HAS CAUSED ALLERGIC SKIN REACTIONS IN HUMANS

**REPEATED DOSE** – ONLY SKIN SENSITIZATION IS AFFECTED BY REPEATED DOSE EXPOSURES

**CHRONIC TOXICITY AND CARCINOGENICITY** – NOT A CARCINOGEN

**DEVELOPMENTAL TOXICITY** – NONE IDENTIFIED

**REPRODUCTIVE TOXICITY** – NONE IDENTIFIED

**GENETIC TOXICITY** – ANIMAL STUDIES WERE NEGATIVE

### PRIMARY ROUTES OF EXPOSURE MEASURES OF TOXICITY:

**ORAL:** LD50 RATS > 2000 MG/KG

**DERMAL:** LD50 RABBITS > 2000 MG/KG

### IRRITATION:

**SKIN:** (RABBIT) MODERATE

**EYE:** (RABBIT) MODERATE

**INHALATION:** NO TEST DATA AVAILABLE

**SENSITIZATION:** MODERATE SENSITIZER

**INHALATION:** MAY CAUSE SENSITIZATION.

**EFFECTS OF OVEREXPOSURE:** PRIMARY SKIN/EYE/RESPIRATORY IRRITATION & SENSITIZER, HEADACHES, MAY CAUSE VERTIGO, NAUSEA, AND VOMITING.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** ASTHMA, CHRONIC RESPIRATORY DISEASE,

**SAFETY DATA SHEET (GLASS ARMOR™)**  
SKIN, AND EYE CONDITIONS.

**SECTION XII. ECOLOGICAL INFORMATION**

**TOXICITY**

MATERIAL IS TOXIC TO AQUATIC ORGANISMS (LC50/EC50/IC50 BETWEEN 1 AND 10 mg/L IN THE MOST SENSITIVE SPECIES).

**PERSISTENCE AND DEGRADABILITY**

OECD TEST GUIDELINES INDICATE THAT THIS MATERIAL CANNOT BE CONSIDERED READILY BIODEGRADABLE. IT SHOULD BE NOTED THAT THE TEST RESULTS DO NOT NECESSARILY MEAN THAT THE MATERIAL IS NOT BIODEGRADABLE UNDER ENVIRONMENTAL CONDITIONS.

**BIOACCUMULATION POTENTIAL**

NO RELEVANT DATA FOUND

**MOBILITY IN SOIL**

MOBILITY IN SOIL IS LOW

**RESULTS OF PBT AND vPvB ASSESSMENT**

NO DATA AVAILABLE

**OTHER ADVERSE EFFECTS**

NO DATA AVAILABLE

**SECTION XIII. DISPOSAL CONSIDERATIONS**

THIS PRODUCT SHOULD BE TREATED AS A HAZARDOUS WASTE IN ITS UNUSED AND UNCONTAMINATED STATE. ALL DISPOSAL PRACTICES MUST BE IN ACCORDANCE WITH ALL GOVERNMENTAL REGULATIONS GOVERNING HAZARDOUS WASTE. USED, CONTAMINATED OR RESIDUAL MATERIAL SHOULD BE EVALUATED PRIOR TO DISPOSAL. DO NOT DUMP INTO SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER.

**SECTION XIV. TRANSPORT INFORMATION**

**DOT**

DOT CLASS: NOT REGULATED, NON HAZARDOUS  
DOT NUMBER: N/A

**ADR/RID**

UN NUMBER -- UN3082  
UN PROPER SHIPPING NAME -- ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, n.o.s.  
(EPOXY RESIN)  
TRANSPORT HAZARD CLASS -- CLASS 9  
PACKING GROUP -- PG III  
ENVIRONMENTALLY HAZARDS -- ENVIRONMENTALLY HAZARDOUS  
SPECIAL PRECAUTIONS -- HAZARD IDENTIFICATION 90

**ADNR/AND**

**SAFETY DATA SHEET (GLASS ARMOR™**

UN NUMBER – UN3082

UN PROPER SHIPPING NAME – ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, n.o.s.  
(EPOXY RESIN)

TRANSPORT HAZARD CLASS – CLASS 9

PACKING GROUP – PG III

ENVIRONMENTALLY HAZARDS – ENVIRONMENTALLY HAZARDOUS

SPECIAL PRECAUTIONS – NO DATA AVAILABLE

**IMDG**

UN NUMBER – UN3082

UN PROPER SHIPPING NAME – ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, n.o.s.  
(EPOXY RESIN)

TRANSPORT HAZARD CLASS – CLASS 9

PACKING GROUP – PG III

ENVIRONMENTALLY HAZARDS – MARINE POLLUTANT

SPECIAL PRECAUTIONS – EMS NUMBER: F-A,S-F

TRANSPORT IN BULK (MARPOL/IBC) – NOT APPLICABLE

**ICAO/IATA**

UN NUMBER – UN3082

UN PROPER SHIPPING NAME – ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, n.o.s.  
(EPOXY RESIN)

TRANSPORT HAZARD CLASS – CLASS 9

PACKING GROUP – PG III

ENVIRONMENTALLY HAZARDS – ENVIRONMENTALLY HAZARDOUS

SPECIAL PRECAUTIONS – NO DATA AVAILABLE

**SECTION XV. REGULATORY INFORMATION**

**RCRA STATUS:** NOT A HAZARDOUS WASTE UNDER RCRA (40 CFR 261)

**CERCLA STATUS:** SARATITLE III - TOXIC CHEMICAL LIST: THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL TOXIC CHEMICAL RELEASE REPORTING" UNDER SECTION 313 (40 CFR 372) CAS #. (BISPHENOL-A), LESS THAN 2%. THIS INFORMATION MUST BE INCLUDED IN ALL MSDS'S THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**TSCA INVENTORY STATUS:** ALL COMPONENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY OR ARE EXEMPT FROM TSCA INVENTORY REQUIREMENTS UNDER 40 CFR 720.30

**EUROPEAN INVENTORY OF EXISTING COMERCIAL CHEMICAL SUBSTANCES (EINECS):** ALL COMPONENTS OF THIS PRODUCT ARE ON THE EINECS INVENTORY OR ARE EXEMPT FROM EINECS INVENTORY REQUIREMENTS

**CANADA HMIS CODE:**

HEALTH: 2      FIRE: 1      REACTIVITY: 0

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### SECTION XVI. OTHER INFORMATION

ISSUE DATE: 2015/04/21 REPLACES MSDS 2003/07/01

FOR FURTHER INFORMATION, PLEASE CONTACT PRODUCT SAFETY DIRECTOR.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE. HOWEVER, SINCE THE CONDITIONS OF HANDLING AND USE ARE BEYOND OUR CONTROL, WE MAKE NO GUARANTEE OF RESULTS, AND ASSUME NO LIABILITY FOR DAMAGES INCURRED BY USE OF THIS MATERIAL. ALL CHEMICALS MAY PRESENT UNKNOWN HEALTH HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST. FINAL DETERMINATION OF SUITABILITY OF THE CHEMICAL IS THE SOLE RESPONSIBILITY OF THE USER. USERS OF ANY CHEMICAL SHOULD SATISFY THEMSELVES THAT THE CONDITIONS AND METHODS OF USE ASSURE THAT THE CHEMICAL IS USED SAFELY. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION CONTAINED HEREIN, OR TO THE CHEMICAL TO WHICH THE USER REFERS.