SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: EPOXY VAPOR BARRIER - COMPONENT A
Product Code: E5990A, E5990A-K3A, E5990A-K1A

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Product Use: Architectural Coating and Waterproofing
Use this product in accordance with all local, regional, national and international regulations.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Gaco Western LLC
1245 Chapman Dr.
Waukesha, WI, 53186-5942
USA

Telephone Number: 800-331-0196 / International: 001-800-331-0196
Email: sds@gaco.com
Website: www.gaco.com

1.4 EMERGENCY TELEPHONE NUMBER

For Chemical Emergency
Spill, Leak, Fire, Exposure, or Incident
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1-703-527-3887 (collect calls accepted)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL

Hazard class:

<table>
<thead>
<tr>
<th>HAZARD CLASSIFICATION</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>2</td>
</tr>
<tr>
<td>Eye Damage/Irritation</td>
<td>2A</td>
</tr>
<tr>
<td>Sensitization - Skin</td>
<td>1</td>
</tr>
</tbody>
</table>

2.2 LABEL ELEMENTS

Hazard pictogram: GHS07
Signal word: Warning

Hazard statement: Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective eye protection/face protection.

Response: Specific treatment (see Section 8 on this label).
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
If skin irritation or a rash occurs: Get medical advice/attention.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Storage: Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 ADDITIONAL INFORMATION

Main symptoms: Causes skin irritation. May cause redness and pain. May cause allergic skin reaction. Dermatitis. Rash. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Hazards not otherwise specified: Toxic to aquatic life with long lasting effects

30.0 % of the mixture consists of ingredient(s) of unknown acute toxicity

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS No.</th>
<th>Weight %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A Epoxy Resin</td>
<td>35068-38-6</td>
<td>30-60%</td>
</tr>
<tr>
<td>Phenol-Formaldehyde Polymer Glycidyl Ether</td>
<td>28064-14-4</td>
<td>10-30%</td>
</tr>
<tr>
<td>1,4-Bis(2,3 epoxypropoxy)butane</td>
<td>2425-79-8</td>
<td>5-10%</td>
</tr>
<tr>
<td>2,6-Dimethylheptan-4-one</td>
<td>108-83-8</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: FIRST-AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURES

General information: Ensure that medical personnel are aware of the materials(s) involved, and take precautions to protect themselves.

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and
bring along these instructions.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Causes skin irritation. May cause redness and pain. May cause allergic skin reaction. Dermatitis. Rash.
- Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

- **Note to physicians:** Treat symptomatically.
- **Specific treatments:** In case of accident or if you feel unwell, seek medical advice (show the label or SDS where possible).

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**SECTION 5: FIRE-FIGHTING MEASURES**

#### 5.1 EXTINGUISHING MEDIA
- **General hazards:** No unusual fire or explosion hazard.
- **Suitable extinguishing media:** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2)
- **Unsuitable extinguishing media:** Do not use water jet as an extinguisher as this will spread the fire.

#### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE
- **Specific hazards:** During fire, gases hazardous to health may be formed.
- **Products of combustion:** May include, and are not limited to: oxides of carbon.

#### 5.3 Special protective equipment and precautions for fire-fighters (PPE)
- **Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
- **Special fire-fighting procedures:** Keep upwind of fire. Move containers from fire area if you can do it without risk.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

#### 6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

**Methods for containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

**Methods for cleaning-up:** Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Following product recovery, flush area with water. For waste disposal, see Section 13 of the SDS.

**Large spills:** Stop the flow of material, if this is without risk. Dike the spilled material,
where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Prevent product from entering drains.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions: Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING
Precautions for Safe handling: Observe good industrial hygiene practices.
General hygiene advice: Ensure that medical personnel are aware of the materials(s) involved, and take precautions to protect themselves.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
Safe storage: Store away from incompatible materials.
Specific use: Architectural Coating and Waterproofing
Technical measures: No specific recommendations.
Incompatible materials: None known, avoid strong oxidizing agents.
Safe packaging material: No specific recommendations.
Precautions: Use personal protective recommended in Section 8 of the SDS.
Safe handling advice: Observe good industrial hygiene practices.
Suitable storage conditions: Store away from incompatible materials.
Handling-technical measures: No specific recommendations.
Local and general ventilation: Provide adequate ventilation.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS
Control parameters: Follow standard monitoring procedures.
Exposure limits:

2,6-Dimethylheptan-4-one
OSHA:
PEL-TWA ppm: 50
PEL-TWA mg/m3: 290
NIOSH:
REL-TWA ppm: 25
REL-TWA mg/m3: 150
IDLH ppm: 500

8.2 EXPOSURE CONTROLS
Engineering measures to reduce exposure: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure
8.3 INDIVIDUAL PROTECTIVE MEASURES

General: Use personal protective equipment as required.
Eye protection: Wear safety glasses with side shields (or goggles).
Hand protection: Wear appropriate chemical resistant gloves.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Skin and body protection: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Hygiene measures: 

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls: Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear Liquid
Color: Clear
Form: Slight solvent
Odor: Not available
Odor Threshold: Not available
Physical State: Liquid
pH (at 20°C): Not available
Melting Point/Freezing Point: Not available
Initial Boiling Point and Boiling Range: Not available
Flash Point: 205°F/96.1°C
Evaporation Rate: Not available
Flammability (solid, gaseous): Not Flammable
Lower Flammability/Explosive Limit: Not available
Upper Flammability/Explosive Limit: Not available
Vapor Pressure (mm Hg @38°C): Not available
Vapor Density: Not available
Density (lb/gal): 9.558
Relative Density/Specific Gravity: 1.147
Solubility in water/miscibility: Not soluble in water
Partition coefficient: n-octanol/water: Not available
Auto-ignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity (at 25°C) g/L: 2800 CPS
Oxidizing Properties: Not available
Explosive Properties: Not available
VOC: <20 g/L (<0.17 lb/gal)
Solvent content - Organic: 0%
Solvent content - Water: 0%
Solvent content - Solids: 97.11%
Other information: Not available
Incompatibilities: None known, avoid strong oxidizing agents.
SECTION 10: STABILITY AND REACTIVITY

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

10.2 CHEMICAL STABILITY
Chemical stability: Material is stable under normal conditions.
Materials to avoid: The product is stable and non-reactive under normal conditions of use, storage and transport.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID
Contact with incompatible materials.

10.5 INCOMPATIBLE MATERIALS
None known, avoid strong oxidizing agents.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous decomposition products: No hazardous decomposition products are known.
Hazardous polymerization: Does not occur.
Other information: Not available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS


Likely routes of exposure: Skin contact. Eye contact. Inhalation.
Eye: Causes serious eye irritation.
Skin: Causes skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Ingestion: Not an expected route of exposure. Expected to be a low ingestion hazard.
Inhalation: Not an expected route of exposure. No adverse effects due to inhalation are expected.

LD50/LC50 values relevant to this classification:

Bisphenol A Epoxy Resin
- Oral rat LD50 >2000 mg/kg bw
- Oral rabbit LD50 19800 mg/kg bw
- Oral rat LD50 > 15000 mg/kg bw
- Oral rat LD50 22,500 mg/kg bw
- Oral rat LD50 11400 mg/kg bw
- Oral rat LD50 > 2000 mg/kg bw
- Oral rat LD50 13,000 mg/kg bw
- Oral mouse LD50 500-800 mg/kg bw
- Oral rat LD50 >1000 mg/kg bw (DMSO)
- Oral rat LD50 >500 mg/kg bw
- Oral rat LD50 >3980 mg/kg bw
- Oral mouse LD50 15600 mg/kg bw
Inhal rat LC50 saturated atm, no deaths
Derm rat LD50 > 2000 mg/kg bw
Derm rabbit LD50 23,032 mg/kg bw
Derm mouse LD50 > 2000 mg/kg bw
Derm rabbit LD50 > 23,000 mg/kg bw
Derm rat LD50 > 800/1600 mg/kg bw
Derm rat LD50 > 1600 mg/kg bw
Derm rabbit LD50 > 2000 mg/kg bw
Derm rabbit LD50 > 3450 mg/kg bw
Derm rabbit LD50 > 3450 mg/kg bw

1,4-Bis(2,3 epoxypropoxy)butane
Oral rat LD50 1118-1293 mg/kg bw
Oral rat LD50 1882 mg/kg bw
Oral rat LD50 1500 mg/kg bw
Oral rat LD50 2462-2609 mg/kg bw
Oral rat LD50 704-1778 mg/kg bw
Derm rat LD50 > 2150 mg/kg bw 24hr

2,6-Dimethylheptan-4-one
Oral rat LD50 > 2000 mg/kg bw
Oral rat LD50 5233-6899 mg/kg bw
Oral rat LD50 5750 mg/kg bw
Oral rat LD50 3200 mg/kg bw (2 tests)
Inhal rat LC50 14.5 mg/L air 4hr
Inhal rat LC50 > 14.5 mg/L air 4hr
Derm rat LD50 > 2000 mg/kg bw
Derm rabbit LD50 4556-10868 mg/kg bw
Derm rat LD50 > 12172 mg/kg bw

Calculated overall chemical acute toxicity values for this formulation:

<table>
<thead>
<tr>
<th>Calculated overall Chemical Acute Toxicity Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 (inhalation)</td>
</tr>
<tr>
<td>&gt;5 mg/kg (dust and mist)</td>
</tr>
</tbody>
</table>

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

**Skin corrosion/irritation:** Causes irritation. May cause redness and pain.

**Serious eye damage/irritation:** Causes serious eye irritation.

**Respiratory sensitization:** Based on available data, this product is not expected to cause respiratory sensitization.

**Skin sensitization:** May cause an allergic skin reaction.

**Symptoms and target organs:** Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Chronic health effects:** No chronic health effects known.

**Carcinogenicity:** This product is not classified as a carcinogen.

**Mutagenicity:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Reproductive Toxicity:** This product is not expected to cause reproductive or developmental effects.

**Specific Target Organ Toxicity (STOT):**

**Single Exposure:** Not classified as an STOT - Single Exposure.

**Repeated Exposure:** Not classified as an STOT - Repeated Exposure.

**Aspiration Toxicity:** Based on available data, this product is not expected to cause aspiration.
SECTION 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY
Ecotoxicity: Toxic to aquatic life with long lasting effects
Acute aquatic toxicity: The product is not classified as acutely environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Chronic toxicity: Toxic to aquatic life with long lasting effects
Environmental effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

12.2 PERSISTENCE AND DEGRADABILITY
Persistence/biodegradability: The product contains substances which are not expected to be readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL
Bioaccumulation: No data available.

12.4 MOBILITY
Mobility: No data available.
Mobility in soil: No data available.
Mobility in non-soil: No data available.

12.5 OTHER ADVERSE EFFECTS
Ozone layer: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS
Disposal method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.
Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Dispose of contents and container in accordance with all local, regional, national and international regulations.
EU codes: The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Residual waste: 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).
Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents and container in accordance with all local, regional, national and international regulations.
Waste codes: The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Other disposal recommendations: None

SECTION 14: TRANSPORT INFORMATION

DOT Non-Bulk
UN: UN3082
Proper shipping name: Environmentally Hazardous Substance, liquid, n.o.s. (epoxy resin)
Hazard class: 9
Packing group: PG III

DOT Bulk

UN: UN3082
Proper shipping name: Environmentally Hazardous Substance, liquid, n.o.s. (epoxy resin)
Hazard class: 9
Packing group: PG III

IMDG

UN: UN3082
Proper shipping name: Environmentally Hazardous Substance, liquid, n.o.s. (epoxy resin)
Hazard class: 9
Packing group: PG III

ICAO/IATA

UN: UN3082
Proper shipping name: Environmentally Hazardous Substance, liquid, n.o.s. (epoxy resin)
Hazard class: 9
Packing group: PG III

Reportable quantity: Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

US Federal Regulations:

U.S. OSHA (Occupational Safety and Health Administration) Specifically Regulated Substances (29 CFR 1910.1001-1050)

No components of this product are present at concentration greater than or equal to 0.1% and are identified as a carcinogen or potential carcinogen by OSHA.

SARA/CERCLA reporting requirements:

No components of this product are found at concentrations greater than or equal to 0.1% and are subject to the SARA/CERCLA reporting requirements.

State Right-to-Know Regulations

The following components of this product are found at concentrations greater than or equal to 0.1%, subject to state Right-to-Know reporting requirements; or are found at any concentration and are listed under California Proposition 65.

<table>
<thead>
<tr>
<th>Material</th>
<th>California Proposition 65</th>
<th>Massachusetts Employee Right-to-Know</th>
<th>Minnesota Employee Right-to-Know</th>
<th>New Jersey Community Environmental Hazard Right-to-Know</th>
<th>New Jersey Right-to-Know Substance</th>
<th>Pennsylvania Right-to-Know</th>
<th>Rhode Island Right-to-Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dimethylheptan-4-one</td>
<td>Not listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Not listed</td>
<td>Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>1-Chloro-2,3-epoxypropane</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
</tr>
</tbody>
</table>

Global Inventories:
EU - REACH Status:
A registration number is not available for substances in this mixture as the substances are exempted from registration, the annual tonnage does not require a registration or the registration is envisioned for a later registration deadline.

CANADA – WHMIS (Workplace Hazardous Materials Information System) Classification:
D2B

MEXICO:
Hazard Classification: 2-1-0
Carcinogen Status: No data available.

SECTION 16: OTHER INFORMATION

HMIS (Hazardous Materials Identification System) rating:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2*</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical</td>
<td>0</td>
</tr>
</tbody>
</table>

NFPA 704 (National Fire Protection Association) rating:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Fire</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

Legend:
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Dangerous Goods
ACGIH  American Conference of Governmental Industrial Hygienists
NTP   National Toxicology Program
IARC  International Agency for Research on Cancer
PPE   Personal Protective Equipment
RCRA  Resource Conservation and Recovery Act
CAA   Clean Air Act
SARA  Superfund Amendments and Reauthorization Act
EPCRA Emergency Planning and Community Right-to-Know Act
WHMIS Workplace Hazardous Materials Information System
EU    European Union
REACH Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
CERCLA Comprehensive Environmental Response, Compensation and Liability Act
TSCA  US Toxic Substances Control Act (TSCA)
DSL   Canada Domestic Substance List (DSL)
NDSL  Canada Non-Domestic Substance List (NDSL)
EINECS European Inventory of Existing Commercial Chemical Substances (EINECS)
ELINCS European List of Notified Chemical Substances (ELINCS)
NLP   European list of No-longer Polymers (NLP)
AICS  Australian Inventory of Chemical Substances (AICS)
EICSC China Existing Chemical Inventory - IECSC
ENCs  Japanese Existing and New Chemical Substances Inventory(ENCs)
KECI  Korea Existing Chemicals Inventory(KECI)
NECI  Taiwan National Existing Chemical Inventory (NECI)
NZIoC New Zealand Inventory of Chemicals (NZIoC)
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
HMIS  Hazardous Materials Identification System
NFPA  National Fire Protection Association (NFPA)

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Version: 1.0
Revision Date: March 22, 2016
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Prepared by: Gaco Western LLC

End of Safety Data Sheet