

# WEST SYSTEM® 105 Epoxy Resin

## Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 6/1/2015

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Version: 105-2016a

### SECTION 1: Identification

#### Identification

**Product name** : WEST SYSTEM® 105 Epoxy Resin  
**Product code** : 105, 105-A, 105-B, 105-C, 105-E, C 105-A, C 105-B, C 105-C, C 105-E

#### Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** : Resin for coatings or adhesives

#### Details of the supplier of the safety data sheet

#### Manufacturer

Gougeon Brothers, Inc  
100 Patterson Ave.  
Bay City, MI 48706 - U.S.A.  
T 866-937-8797 or 989-684-7286  
[www.westsystem.com](http://www.westsystem.com)

#### Emergency telephone number

**Emergency number** : CHEMTREC 1 (800) 424-9300  
CHEMTREC International +1 (703) 527-3887 24 hr

### SECTION 2: Hazard(s) identification

#### Classification of the substance or mixture

Skin Irrit. 2  
Eye Irrit. 2A  
Skin Sens. 1  
Aquatic Chronic 2

#### Label elements

#### Hazard pictograms (GHS)



GHS07

GHS09

#### Signal word (GHS)

Warning

#### Hazard statements (GHS)

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects

#### Precautionary statements (GHS)

Avoid breathing dust, fume, gas, mist, vapours, spray. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves, protective clothing, eye protection. If on skin: Wash with plenty of soap and water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### Other hazards

No additional information available

#### Unknown acute toxicity

Not applicable

### SECTION 3: Composition/information on ingredients

#### Substance

Not applicable

#### Mixtures

Name	Product identifier	%
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer	(CAS No) 25085-99-8	60 - 100

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Name	Product identifier	%
Benzyl alcohol	(CAS No) 100-51-6	10 - 30
Phenol, polymer with formaldehyde, glycidyl ether	(CAS No) 28064-14-4	1 - 10

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold. Refer to Section 15 for additional information regarding this CBI claim.

### SECTION 4: First aid measures

#### Description of first aid measures

- First-aid measures after inhalation** : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact** : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion** : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

- Symptoms/injuries after inhalation** : Not a normal route of exposure. May cause respiratory tract irritation.
- Symptoms/injuries after skin contact** : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
- Symptoms/injuries after eye contact** : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/injuries after ingestion** : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: Firefighting measures

#### Extinguishing media

- Suitable extinguishing media** : Foam. Carbon dioxide. Dry chemical.
- Unsuitable extinguishing media** : Do not use a heavy water stream.

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

- Fire hazard** : Products of combustion may include, and are not limited to: oxides of carbon, phenolics.
- Reactivity** : No dangerous reaction known under conditions of normal use.

#### Advice for firefighters

- Protection during firefighting** : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water spray.

### SECTION 6: Accidental release measures

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

- General measures** : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

#### For non-emergency personnel

No additional information available

#### For emergency responders

No additional information available

#### Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

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### Methods and material for containment and cleaning up

**For containment** : Stop leak if safe to do so. 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** : Scoop up material and place in a disposal container. Provide ventilation. Clean contaminated surfaces thoroughly.

### Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### Precautions for safe handling

**Precautions for safe handling** : Avoid contact with skin and eyes. Avoid breathing dust, fume, gas, mist, vapours, spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. When mixed with epoxy curing agents this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

**Hygiene measures** : Contaminated work clothing should not be allowed out of the workplace. Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### Conditions for safe storage, including any incompatibilities

**Storage conditions** : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Storage temperature : 40°F (4°C) - 120°F (49°C). Keep away from heat and direct sunlight.

## SECTION 8: Exposure controls/personal protection

### Control parameters

<b>Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8)</b>		
Not applicable		
<b>Benzyl alcohol (100-51-6)</b>		
AIHA	WEEL TWA (ppm)	10 ppm
<b>Phenol, polymer with formaldehyde, glycidyl ether (28064-14-4)</b>		
Not applicable		

### Exposure controls

**Appropriate engineering controls** : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

**Hand protection** : Wear chemically resistant protective gloves.

**Eye protection** : Wear eye/face protection.

**Skin and body protection** : Wear suitable protective clothing.

**Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls** : Maintain levels below Community environmental protection thresholds.

**Other information** : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

**Physical state** : Liquid  
**Appearance** : Viscous  
**Colour** : Colourless  
**Odour** : Mild  
**Odour threshold** : No data available  
**pH** : No data available  
**Melting point** : No data available

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<b>Freezing point</b>	: No data available
<b>Boiling point</b>	: > 400 °F (204 °C)
<b>Flash point</b>	: > 200 °F (93 °C) (estimated based on ingredient data)
<b>Relative evaporation rate (butylacetate=1)</b>	: No data available
<b>Flammability (solid, gas)</b>	: Non flammable.
<b>Vapour pressure</b>	: No data available
<b>Relative vapour density at 20 °C</b>	: Heavier than air (estimated based on ingredient data)
<b>Relative density</b>	: 1.15
<b>Solubility</b>	: No data available
<b>Partition coefficient n-octanol/water</b>	: No data available
<b>Auto-ignition temperature</b>	: No data available
<b>Decomposition temperature</b>	: No data available
<b>Viscosity, kinematic</b>	: 869.5 mm <sup>2</sup> /s @ 68 °F (20 °C)
<b>Viscosity, dynamic</b>	: No data available
<b>Explosive limits</b>	: No data available
<b>Explosive properties</b>	: No data available
<b>Oxidising properties</b>	: No data available
<b>Other information</b>	
<b>Bulk density</b>	: 9.6 lb/gal (1.15 kg/L)

### SECTION 10: Stability and reactivity

<b>Reactivity</b>	: No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	: Stable under normal storage conditions.
<b>Possibility of hazardous reactions</b>	: No dangerous reaction known under conditions of normal use. A mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with significant heat buildup. Strong acids, bases, amines and mercaptans can cause polymerization.
<b>Conditions to avoid</b>	: Heat. Incompatible materials.
<b>Incompatible materials</b>	: Strong acids. Bases. Amines. Mercaptans.
<b>Hazardous decomposition products</b>	: May include, and are not limited to: oxides of carbon, phenolics.

### SECTION 11: Toxicological information

#### Information on toxicological effects

<b>Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8)</b>	
LD50 oral rat	> 15000 mg/kg
LD50 dermal rabbit	> 23000 mg/kg
<b>Benzyl alcohol (100-51-6)</b>	
LD50 oral rat	1620 mg/kg
LC50 inhalation rat	4.18 mg/l/4h
<b>Phenol, polymer with formaldehyde, glycidyl ether (28064-14-4)</b>	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	2000 mg/kg

<b>Acute toxicity (oral)</b>	: Not classified.
<b>Acute toxicity (dermal)</b>	: Not classified.
<b>Acute toxicity (inhalation)</b>	: Not classified.
<b>Skin corrosion/irritation</b>	: Causes skin irritation.
<b>Serious eye damage/irritation</b>	: Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	: May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	: Not classified.
<b>Carcinogenicity</b>	: Not classified. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.
<b>Reproductive toxicity</b>	: Not classified.
<b>STOT-single exposure</b>	: Not classified.
<b>STOT-repeated exposure</b>	: Not classified.

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**Aspiration hazard** : Not classified.

WEST SYSTEM® 105 Epoxy Resin	
Viscosity, kinematic (calculated value) (40 °C)	869.5 mm <sup>2</sup> /s @ 68 °F (20 °C)

**Symptoms/injuries after inhalation** : Not a normal route of exposure. May cause respiratory tract irritation.  
**Symptoms/injuries after skin contact** : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic skin reaction.  
**Symptoms/injuries after eye contact** : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.  
**Symptoms/injuries after ingestion** : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.  
**Other information** : Likely routes of exposure: ingestion, inhalation, skin and eye.

### SECTION 12: Ecological information

#### Toxicity

**Ecology - general** : Toxic to aquatic life with long lasting effects.

Benzyl alcohol (100-51-6)	
LC50 fish 1	460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	23 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	10 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

#### Persistence and degradability

WEST SYSTEM® 105 Epoxy Resin	
Persistence and degradability	Not established.

#### Bioaccumulative potential

WEST SYSTEM® 105 Epoxy Resin	
Bioaccumulative potential	Not established.

Benzyl alcohol (100-51-6)	
Partition coefficient n-octanol/water	1.1

#### Mobility in soil

No additional information available

#### Other adverse effects

**Effect on the global warming** : No known effects from this product.

Name	Product identifier	Ecotoxicity Classification Information
Oxirane, 2,2'-[[1-methylethylidene]bis(4,1-phenyleneoxymethylene)]bis-, homopolymer	(CAS No) 25085-99-8	Aquatic Chronic Cat. 2
Benzyl alcohol	(CAS No) 100-51-6	Not Classified
Phenol, polymer with formaldehyde, glycidyl ether	(CAS No) 28064-14-4	Aquatic Chronic Cat. 2

### SECTION 13: Disposal considerations

#### Waste treatment methods

**Product/Packaging disposal recommendations** : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

**Ecology - waste materials** : Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated

#### Transport by sea

In accordance with IMDG

UN-No. (IMDG) : 3082

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Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)
Class (IMDG)	: 9
Packing group (IMDG)	: III
EmS Number	: F-A, S-F
Marine Pollutant	: Yes

### Transport by air

In accordance with IATA	
UN-No. (IATA)	: 3082
Proper Shipping Name (IATA)	: Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)
Class (IATA)	: 9
Packing group (IATA)	: III
Marine Pollutant	: Yes

## SECTION 15: Regulatory information

### Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

#### Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8)

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
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#### Phenol, polymer with formaldehyde, glycidyl ether (28064-14-4)

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
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#### Epichlorohydrin (106-89-8)

Listed on the United States SARA Section 302  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	0.1 %

Canada WHMIS Confidential Business Information (CBI): The HMIRA number issued for this CBI claim is #9455. The date of filing is 2015-04-09.

### International regulations

No additional information available

### US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

#### Epichlorohydrin (106-89-8)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
Yes	No	No	Yes	9 µg/day

#### Benzyl alcohol (100-51-6)

U.S. - Pennsylvania - RTK (Right to Know) List

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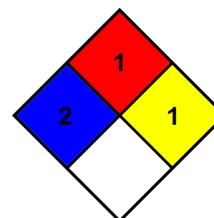
### Epichlorohydrin (106-89-8)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

**Issue date** : 6/1/2015  
**Revision date** : 8/15/2016  
**Version** : 105-2016a  
**Other information** : None.

**NFPA health hazard** : 2  
**NFPA fire hazard** : 1  
**NFPA reactivity** : 1



**HMIS III Rating**  
**Health** : 2  
**Flammability** : 1  
**Physical** : 1

*Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.*