Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **SPI-Pon 812**

Synonyms • 1,2,3-Propanetriol, polymer with (chloromethyl)-oxirane; Glyceringlycidether; SPI #02659-AB SPI-PON™ 812 Epoxy Resin Monomer

Product Code • 02659-AB

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

Relevant identified use(s) • Embedding resin for specimens for Transmission Electron Microscopy

1.3 Details of the supplier of the safety data sheet

Manufacturer • SPI Supplies Division Structure Probe, Inc.

206 Garfield Ave.
West Chester, PA 19380
United States
http://www.2spi.com
SDS@2spi.com

Telephone (General) • 1-(610)-436-5400

1.4 Emergency telephone number

Manufacturer • 1-(800)-424-9300 - Chemtrec

Manufacturer • 1-(703)-741-5970 - Worldwide

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP • Skin Irritation 2 - H315
Skin Sensitization 1 - H317
Eye Irritation 2 - H319

2.2 Label Elements

CLP

WARNING

Hazard statements • H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements

Prevention • P261 - Avoid breathing mist, vapours and/or spray.

P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response • P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P321 - Specific treatment, see supplemental first aid information.
P362 - Take off contaminated clothing and wash before reuse.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage/Disposal • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Skin Irritation 2
Skin Sensitization 1
Eye Irritation 2

2.2 Label elements

OSHA HCS 2012

WARNING

Hazard statements • Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation

Precautionary statements

Prevention • Avoid breathing mist, vapours and/or spray.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • If on skin: Wash with plenty of water .
Specific treatment, see supplemental first aid information.
Take off contaminated clothing and wash before reuse.
If skin irritation or 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/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012 • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Glyceringlycidether	**CAS:**90529-77-4 **EINECS:**292-011-4	> 99.9%	NDA	**EU CLP:** Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 **OSHA HCS 2012:** Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention.

Eye
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion
- Rinse mouth. Give plenty of water to drink. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- LARGE FIRE: Water spray, fog or regular foam.
  SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing Media
- No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- No data available

Hazardous Combustion Products
- Carbon monoxide and carbon dioxide, hydrogen chloride, phosgene gas, toxic pyrolysis products, may be formed.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
  Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
  Wear positive pressure self-contained breathing apparatus (SCBA).

LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Stay upwind. Keep out of low areas. Keep unauthorized personnel away.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
  SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
  LARGE SPILLS: Dike far ahead of spill for later disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Keep away from sources of ignition – No Smoking. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep only in the original container. Keep container/package tightly closed in a cool, well-ventilated place. Store at 15ºC to 25ºC

7.3 Specific end use(s)

- This item is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption. Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- No applicable exposure limits available for product or components.

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation 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 limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face	• Wear chemical splash safety goggles.
Skin/Body	• Wear neoprene gloves with penetration time >/= 8 hours. Wear long sleeves and/or protective coveralls.
Environmental Exposure Controls	• Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Yellow, odorless liquid.
Color	Yellow	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	>= 180 °C(>= 356 °F)	pH	6 to 8 (10 g/l) at 20°C
Specific Gravity/Relative Density	Data lacking	Density	1.22 g/mL @ 20 °C(68 °F)
Water Solubility	Soluble 20 to 30 g/L @ 20 °C(68 °F)	Viscosity	100 to 200 Centipoise (cPs, cP) or mPas Dynamic at 20°C
Explosive Properties	Data lacking	Oxidizing Properties:	Data lacking
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	VOC (Wt.)	0.7 to 0.8 %
VOC (Vol.)	0.7 to 0.8 %		
Flammability			
Flash Point	175 °C(347 °F)	UEL	Data lacking
LEL	Data lacking	Autoignition	270 to 310 °C(518 to 590 °F)
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Keep away from heat, sparks and flame.

10.5 Incompatible materials

- Alkalies, strong acids, strong bases, some metallic salts, oxidizing agents, some powdered metals.

10.6 Hazardous decomposition products

- Hydrogen chloride, phosgene, toxic pyrolysis products, carbon dioxide, carbon monoxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Skin corrosion/Irritation	**EU/CLP** • Skin Irritation 2 **OSHA HCS 2012** • Skin Irritation 2
Serious eye damage/Irritation	**EU/CLP** • Eye Irritation 2 **OSHA HCS 2012** • Eye Irritation 2
Skin sensitization	**EU/CLP** • Skin Sensitizer 1 **OSHA HCS 2012** • Skin Sensitizer 1
Respiratory sensitization	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Aspiration Hazard	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Carcinogenicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Germ Cell Mutagenicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Toxicity for Reproduction	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
STOT-SE	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
STOT-RE	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)
- No data available

Chronic (Delayed)
- No data available

Skin

Acute (Immediate)
- Causes skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash.

Chronic (Delayed)
- No data available

Eye

Acute (Immediate)
- Causes serious eye irritation.

Chronic (Delayed)
- No data available

Ingestion

Acute (Immediate)
- No data available

Chronic (Delayed)
- No data available

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

14.6 Special precautions for user
- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Data lacking.

Section 15 - Regulatory Information

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

SARA Hazard Classifications
- Acute

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ELNICS**	**TSCA**
Glyceringlycidether	90529-77-4	No	No	Yes	No	No

Canada

Labor

Canada - WHMIS 1988 - Classifications of Substances

• Glyceringlycidether	90529-77-4	Not Listed

Canada - WHMIS 1988 - Ingredient Disclosure List

• Glyceringlycidether	90529-77-4	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Glyceringlycidether	90529-77-4	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Glyceringlycidether	90529-77-4	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Glyceringlycidether	90529-77-4	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Glyceringlycidether	90529-77-4	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Glyceringlycidether	90529-77-4	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Glyceringlycidether	90529-77-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Glyceringlycidether	90529-77-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Glyceringlycidether	90529-77-4	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Revision Date
- 19/December/2016

Preparation Date
- 08/April/2013

Disclaimer/Statement of Liability
- Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids. The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof, however SPI Supplies and Structure Probe, Inc. make no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assume no liability to any user thereof. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. Be aware of the Structure Probe, Inc. Copyright Policy. Structure Probe, Inc. grants a nonexclusive license to make unlimited copies of this safety sheet for internal use only. Quite obviously, this information would pertain only to this material when purchased from SPI Supplies as product from other sources, with other ingredients and impurity levels could have substantially different properties.

Key to abbreviations

NDA = No Data Available