

Safety Data Sheet



1. Product and Company Identification

Product Name: **EpoPro® 261A**
Material Uses: Epoxy Potting Compound
(M)SDS#: 261A-20190308
Validation Date: March-08-2019
Supplier/Manufacturer: Specialty Polymers & Services, Inc. (SP&S, Inc.)
27822 Fremont Court
Valencia, California (CA) 91355, U.S.A.
Non-emergency phone number: (661) 294-1790 (7AM – 5PM PST)
E-mail: msds@spolymers.com

In case of emergency: Chemtrec (800) 424-9300 or (703) 527-3887

2. Hazards Identification

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Skin corrosion/irritation:	Category 2, H315	Eye damage/irritation:	Category 2, H319
Skin sensitization:	Category 1, H317	Aquatic Hazard (Chronic):	Category 2, H411
Aquatic Hazard (Acute):	Category 3, H402		

GHS LABEL ELEMENTS:

HAZARD SYMBOLS:



SIGNAL WORDS: Warning!

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.
H402 Harmful to aquatic life.	

PRECAUTIONARY STATEMENTS:

PREVENTION: P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, clothing, and eye/face protection.

RESPONSE: P301+P330+P331+P312 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call POISON CENTER and/or doctor if you feel unwell.
P303+P361+P364+P353+P352 IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 attention.
P391 Collect spillage.

STORAGE: None

DISPOSAL: P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

See toxicological information (section 11)

General Information: Read entire MSDS for a more thorough evaluation of the hazards

3. Composition / Information on Ingredients

Name	CAS Number	%
Bisphenol A Epoxy Resin	25068-38-6	15 – 45
C ₁₂ -C ₁₄ -alkylglycidyl ether	68609-97-2	1 – 5
Fatty acids, tall-oil, esters with polyethylene glycol mono (hydrogen maleate), compds. with amides from diethylenetriamine and tall-oil fatty acids	222716-38-3	< 1

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. First Aid Measures

Eye Contact:	Check for and remove any contact lenses. Immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get medical attention if irritation occurs.
Skin Contact:	In case of contact, wash affected areas with plenty of water, and soap, if available, for several minutes. Remove and clean contaminated clothing and shoes before re-use. Get medical attention if irritation occurs.
Inhalation:	Move exposed person to fresh air. Get medical attention if symptoms develop. If not breathing, give artificial respiration or oxygen. If breathing is difficult, transport to medical care and, if available, give supplemental oxygen. Loosen tight clothing such as a collar, tie, belt, or waistband. Get immediate medical attention.
Ingestion:	Wash out mouth with water. If swallowed dilute by giving two (2) glasses water to drink. Do not induce vomiting until direct to do so by medical personnel. If vomiting occurs, lie on your side, in recovery position. Never give anything by mouth to an unconscious person. Get medical attention.
Note to physician:	No specific treatment. Treat symptomatically. Call poison control center if large quantities were ingested.

5. Fire-Fighting Measures

Flash point:	>100°C (>212°F) closed cup
Hazardous Thermal Decomposition Products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, phenolics, aldehydes, formaldehyde, other oxides, and other products of incomplete combustion. Smoke may contain particles of the original material as well. Exposure to decomposition products may be harmful to health.
Extinguishing Media:	Carbon dioxide, alcohol resistant foam, dry chemical, water fog; use water spray to cool fire-exposed containers. Do not use direct water stream which may spread fire.
Special Exposure Hazards:	Promptly isolate the scene by removing all persons from the vicinity of the fire. No actions shall be taken involving any personal risk or without suitable training.
Special Protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Closed containers exposed to extreme heat may rupture due to pressure build-up.

6. Accidental Release Measures

Personal Precautions:	No actions shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering area. Do not touch or walk through spilled material. Avoid breathing vapor or mist and provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
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Environmental Precautions: Avoid dispersal of spilled material and runoff that leads to contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution.

Methods of Clean Up: Stop leak if without risk. Move containers from spill area. Approach spill from up wind if possible. Prevent spill from entering sewers, rivers and other water courses, basements, or confined areas. Wash into effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material (e.g. sand, earth, vermiculite, or diatomaceous earth) and place in container for disposal according to local regulations. Dispose of only using a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information.

7. Handling and Storage

Handling: Wear appropriate personal protective equipment (see Section 8) when handling. Eating, drinking, and smoking should be prohibited in areas where chemicals are handled, stored, or processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in processes where this material is used. Keep in the original container or a suitable alternate made from a compatible material. Keep all containers tightly closed when not in use. Empty containers retain product residue and should be disposed of properly. Do not reuse empty containers for other purposes or to hold other materials.

Storage: Store in accordance with local regulations. Store in original containers, at 15°C - 35°C. Keep away from incompatible materials (see Section 10) and food and drink. Keep all containers tightly closed when not in use and tightly re-seal after use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Ingredient	Exposure limits
Recommended Monitoring Procedures:	If this product contains ingredients with exposure limits, personal, workplace, atmospheric, or biological monitoring may be required to determine the effectiveness of the ventilation system or other control measures and/or to determine whether it is necessary to use respiratory protective equipment. Consider European Standard EN 689 or similar industry or governmental guidelines for appropriate methods for the assessment of exposure by inhalation to chemical agents and/or hazardous substances.
Engineering measures:	No special ventilation requirements are necessary for this product. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure below the recommended or statutory limits.
Hygiene measures:	Wash hands, forearms, and face thoroughly after handling any chemical products, before eating, smoking, and using the lavatory and at the end of the work period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Respiratory: A respiratory protection program in compliance with 29CFR1910.134, or other applicable regulatory standard must be followed whenever exposure limits may be exceeded. If engineering controls are not feasible, or if inadequate ventilation wear respiratory protection. 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.

Hands: Wear neoprene, nitrile rubber or other suitable impervious gloves; consider European Standard EN374 or similar industry or governmental guidelines. Consider the parameters specified by the glove manufacture and check gloves during use to ensure they are retaining their protective properties. Gloves selected must have a breakthrough rating appropriate for the work shift. If a risk assessment indicates that it is necessary, gloves should always be worn when handling chemical products.

Eyes: When a risk assessment indicates, safety eyewear complying with an approved standard, such as OSHA Standard 29CFR1910.133 or European Standard EN166, should be used to avoid exposure to liquid splashes, mists, or dusts. If contact is possible, at a minimum use chemical splash goggles. If significant splash hazard may occur, consider using a full-face shield.

Skin: Personal Protective equipment for the body should be selected based on the task being performed and the risks involved. Typical protective equipment includes non-absorbent lab coats, disposable

protective sleeves, coats, or whole-body suits. Consider CFR1910.132 and CFR1910.136 for OSHA approved standards on protective clothing and footwear. Consider seeing a safety specialist to determine the appropriate level of protection for your task.

Environmental Emissions from ventilation or work processes should be checked to ensure they comply with the requirements of environmental regulations. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Appearance:	Off-white to tan smooth filled liquid	Odor	slight
Boiling Point:	Not determined	Freezing Point:	Not determined
Flash Point:	>100°C (>212°F) closed cup	pH:	Not determined
Auto-ignition Temperature:	Not determined	Flammable Limits:	Not determined
Vapor Pressure:	< 1 mm Hg at 20°C (68°F)	Water Solubility:	negligible
Specific Gravity:	1.627	Vapor Density:	Not determined
Evaporation Rate:	<1 (butyl acetate =1)	VOC:	<24 g/ L (estimated)
Viscosity:	~34,500 cP		

10. Stability and Reactivity

Chemical Stability:	This product is stable, under normal conditions of storage and use, hazardous reactions will not occur. Upon prolonged storage the material may crystallize which is a reversible condition; crystallized material can be liquefied back by heating slowly to 50°C for 6-24 hours.
Hazardous Polymerization:	Under normal conditions of storage and use, hazardous polymerization will not occur. Masses of more than one-pound (0.5kg) product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up. Material will polymerize in contact with sodium hydroxide.
Conditions to Avoid:	High temperatures and exposure to strong oxidizing agents, strong reducing agents, acids, bases, alkalis, amines, mercaptans, and peroxides. To avoid thermal decomposition, do not overheat.
Hazardous Decomposition	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal Decomposition products may include the following materials: carbon dioxide, carbon monoxide, phenolics, aldehydes, formaldehyde, other oxides, and other products of incomplete combustion. Smoke may contain particles of the original material as well. Exposure to decomposition products may be harmful to health.

11. Toxicological Information

Acute Toxicity

Product/Ingredient Name	Test	Endpoint	Species	Result
Bisphenol A Epoxy Resin	-	LC50 Inhalation Vapor	Rat – Male	0.00001 ppm
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat – Male & Female	>2000 mg/kg
	OECD 420 Acute Oral Toxicity – Fixed Dose	LD50 Oral	Rate – Female	>2000 mg/kg
C ₁₂ -C ₁₄ -alkylglycidyl ether	-	LD50 Oral	Rat	19,200 mg/kg
	-	LD50 Dermal	Rabbit	>4,500 mg/kg
	-	LC 0 Inhalation	Rat	0.15 mg/l (7-hr)

Irritation / Corrosion

Product/Ingredient Name	Test	Species	Result
Bisphenol A epoxy Resin	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin – Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes – Mild irritant
C ₁₂ -C ₁₄ -alkylglycidyl ether	Draize	Rabbit	Skin – Irritant
	-	Rabbit	Eyes – Non-irritant

Sensitizer

Product/Ingredient Name	Test	Species	Result
Bisphenol A epoxy Resin	OECD 429 Skin Sensitization: local lymph node assay	Skin / Mouse	Sensitizing
C ₁₂ -C ₁₄ -alkylglycidyl ether	-	Guinea pig	Sensitizing to skin

Mutagenicity

Product/Ingredient Name	Test	Result
Bisphenol A epoxy Resin	Experiment – invitro, bacteria, metabolic activation +/-	Positive
	Experiment – invitro, mammalian-animal, somatic cells, metabolic activation +/-	Positive
	Experiment – invivo, mammalian-animal, germ cells, metabolic activation +/-	Negative
	Experiment – invivo, mammalian-animal, somatic cells, metabolic activation +/-	Negative
C ₁₂ -C ₁₄ -alkylglycidyl ether	Alkyl Glycidyl Ether did not induce DNA damage in cultured cells or mutation in cultured Chinese hamster ovary cells.	

Conclusion/ Summary: the weight of scientific evidence indicates that the components of this product are not genotoxic.

No other component of this product is genotoxic.

Carcinogenicity

Crystalline Silica (quartz) in the form of respirable dust are listed by IARC as class 1 (known human carcinogen) and listed by NTP as Group A (Known Human Carcinogen); however, in this product the silica is encapsulated in resin and therefore not available to be exposed to users as a respirable dust.

No other component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA

Reproductive Toxicity

Product/Ingredient Name	Test	Species	Maternal Toxicity	Fertility	Developmental Effects
Bisphenol A Epoxy Resin	OECD 416 Two generation reproduction toxicity study	Rat	Negative	Negative	Negative

Teratogenicity

Product/Ingredient Name	Test	Species	Results
Bisphenol A Epoxy Resin	OECD 414 Prenatal developmental Toxicity Study	Rat – Female	Negative – oral
	EPA CFR	Rabbit – Female	Negative – dermal
	OECD 414 Prenatal developmental Toxicity Study	Rabbit – Female	Negative – oral

Potential Acute Health Effects

Inhalation: May cause respiratory irritation. There may be vomiting, nausea, stomach pain, drowsiness, mental confusion.
 Ingestion: May be irritating to the mouth, throat and stomach; nausea and stomach pain may occur.
 Skin Contact: Causes skin irritation. May cause an allergic skin reaction.
 Eye Contact: Causes serious eye irritation; pain, irritation, watering, redness.

Potential Chronic Health Effects

Product/Ingredient Name	Test	Endpoint	Species	Results
Bisphenol A Epoxy Resin	OECD 408 Repeated Dose 90-Day Oral Toxicity Study	Sub-chronic NOAEL Oral	Rat-Male, Female	50 mg/kg
	OECD 411 Sub-chronic Dermal Toxicity: 90-day Study	Sub-chronic NOAEL Dermal	Rat-Male, Female	10 mg/kg
	OECD 411 Sub-chronic Dermal Toxicity: 90-day Study	Sub-chronic NOAEL Dermal	Mouse-Male	100 mg/kg

General: Once sensitized, an allergic reaction may occur when subsequently exposed to very low levels.
 Target Organs: No known significant effects or critical hazards.
 Carcinogenicity: No known significant effects or critical hazards.
 Mutagenicity: No known significant effects or critical hazards.
 Teratogenicity: No known significant effects or critical hazards.
 Developmental Effects: No known significant effects or critical hazards.
 Fertility Effects: No known significant effects or critical hazards.

12. Ecological Information

Environmental Effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic Ecotoxicity

Product/Ingredient Name	Test	Endpoint	Exposure	Species	Result
Bisphenol A Epoxy Resin	-	Acute EC50	72 hours Static	Algae	9.4 mg/l
	OECD 202 Daphnia Sp. Acute Immobilization Test	Acute EC50	48 hours Static	Daphnia	1.7 mg/l
	-	Acute IC50	3 hours Static	Bacteria	>100 mg/l
	OECD 203 Fish, Acute toxicity test	Acute LC50	96 hours Static	Fish	1.5 mg/l
	OECD 211 Daphnia Magna Reproduction test	Chronic NOEC	21 days Semi-Static	Daphnia	0.3 mg/l
C ₁₂ -C ₁₄ -alkylglycidyl ether	-	Acute LC50	96 hours	Fish	1,800 mg/l
	-	Acute EC50	48 hours	Daphnia	6.07 mg/l
	-	Acute EC0	-	Daphnia	10 mg/l
	-	Acute IC50	72 hours	Algae	844 mg/l

Fatty acids, tall-oil, esters with polyethylene glycol mono (hydrogen maleate), compds. with amides from diethylenetriamine and tall-oil fatty acids	-	Acute LC50	96 hours	Fish	0.1-1 mg/l
	-	Acute LC50	48 hours	Daphnia	0.1-1 mg/l
		Acute EC50	72 hours	Algae	0.1-1 mg/l
	OECD Test Guideline 209 activated sludge	Acute EC50	3 hours	Bacteria	0.1-1 mg/l

Persistence and Degradability

Product/Ingredient Name	Test	Period	Result
Bisphenol A epoxy Resin	-OECD derived from OECD 301F (Biodegradation test)	28 days	5%

Product/Ingredient Name	Aquatic half-life	Photolysis	Biodegradability
Bisphenol A epoxy Resin	Fresh water 3.58 days – 7.1 days	-	Not readily
C ₁₂ -C ₁₄ -alkylglycidyl ether	-	-	Readily
Fatty acids, tall-oil, esters with polyethylene glycol mono (hydrogen maleate), compds. with amides from diethylenetriamine and tall-oil fatty acids	-	-	Not readily

Bioaccumulative potential

Product/Ingredient Name	Log P _{ow}	BCF	Potential
Bisphenol A epoxy Resin	3.242	31	Low
C ₁₂ -C ₁₄ -alkylglycidyl ether	>3	160	Low

Other adverse effects: No known significant effects or critical hazards

Other information: BOD5: Not determined COD: Not Determined TOC: Not determined

13. Disposal Consideration

Waste Disposal Method: Disposal of this products, solutions, and by-products should at all times comply with the requirements of environmental and waste disposal legislation and any regional or local authority requirements. Dispose of surplus, non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed on untreated to the sewer system unless this is complaint with all applicable laws and regulations. Incineration by an approved and licensed contractor is the most common disposal method. Packaging materials that and absorbents containing the product can typically be landfilled or incinerated. Contact local authorities to determine the proper means of disposal in your area.

14. Transport Information

DOT (US) Classification: Not regulated for transportation purposes under 49CFR in non-bulk (less than 450L) when transported by motor vehicle, rail car, or aircraft.

TDG (Canadian) Classification: Not regulated for transportation purposes when transported by road or rail.

IATA – small package sizes: Container sizes with net contents of ≤ 5 L (for liquids) or ≤ 5 kg (for solids) are not subject to dangerous good regulations per special provision A197, provided that the packagings meet the general good quality packagings provisions of 5.0.2.4.1, 5.0.2.6.1.1., and 5.0.2.8. If special revision A197 is not applicable due to operator, state, or other variations then the same sizes can be shipped as Limited Quantity using packaging instruction Y964 as long as the shipment is complaint with all applicable operator variations. Environmentally hazardous substances markings and UN boxes are not required when shipping using the Limited Quantity exemption and packaging instruction Y964.

IATA ID Number: UN3082 **Label:** Marine Pollutant
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy Resin, Talloil Fatty Acid)
Hazard Class: 9 **Packing Group:** PGIII

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This product is a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III: Section 304 - CERCLA: This product does not contain chemicals regulated under Section 304 as extremely hazardous substance(s) for emergency release notification ("CERCLA" List):


SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain a toxic chemical for routine annual Toxic Chemical Release Reporting under section 313 (40 CFR 372).

TSCA Section 8(b) - Inventory Status: All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA Section 12(b) - Export Notification: This product does not contain chemicals which are subject to Section 12(b) export notification.

State Regulations:

California Proposition 65:  **WARNING:** This product can expose you to chemicals including Epichlorohydrin, which is known to the state of California to cause cancer, and Bisphenol A and Epichlorohydrin, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

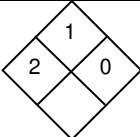
International Regulations:

WHMIS: Class D-2B: Material causing other toxic effects

International Lists:

Canada Inventory (CEPA-DSL):	all components are listed or exempt	Korea Inventory (ECL):	all components are listed or exempt
China Inventory (IECSC):	all components are listed or exempt	Japan Inventory (ENCS):	all components are listed or exempt
Europe Inventory (EINECS):	all components are listed or exempt		

16. OTHER INFORMATION

Hazardous Material Information System (HMIS) - USA		National Fire Protection Association (USA):	
Health	2		
Flammability	1		
Physical Hazards	0		
Personal Protection	C*		

*suggested minimum personal protection equipment. End user must determine appropriateness of these suggestions for their applications and usage conditions.

Reason Issued: update
Prepared By: Preston White
Approved By: Chris Meyer Title: Vice President

NOTICE TO READER: While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF PRODUCTS FOR THE USER'S PARTICULAR PURPOSE(S).

THIS PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.