

MATERIAL SAFETY DATA SHEET — 16 Sections

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier WetLink Thixotropic 80A Potting Compound (Epoxy) – Part A (Larger diameter cylinder on combined cartridge)		SKU POTTING-THX-80A-R1	
Product Use Epoxy adhesive, sealant & coating			
Manufacturer's Name RELTEK LLC		Supplier's Name Blue Robotics Inc.	
Street Address 2345 Circadian Way		Street Address 4030 Spencer St., Suite 102	
City Santa Rosa	State CA	City Torrance	State CA
Postal Code 95407	Emergency Telephone (800) 535-5053 (USA) (352) 323-3500 (Int)	Postal Code 90503	Emergency Telephone (800) 255-3924 (USA) (813) 248-0585 (Int)
Date MSDS Prepared 18 SEP 2018	MSDS Prepared By Blue Robotics, Inc.		

SECTION 2 — HAZARDS IDENTIFICATION

Classification of the substance or mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Health Hazard:

- H319: Causes serious eye irritation.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.

Environmental Hazards:

H411: Toxic to aquatic life with long lasting effects

Physical Hazards:

Not classified - No dangerous reaction known under conditions of normal use.

Signal Word:

WARNING



Skin irritation, Eye effects



Acute Toxicity (harmful)

Precautionary Statements (Phrases):

- P202: Do not handle until all safety precautions have been read and understood.
- P262: Do not get in eyes, on skin, or on clothing
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P302+P352: IF ON SKIN: Wash with soap and water
- P305+351+338: IF IN EYES: Rinse continuously 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
- P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P308 + P313: If exposed or concerned: Get medical advice/attention.
- P273: Avoid release to the environment
- P391: Collect spillage
- P501: Dispose of contents/container to: Send to a licensed recycler, reclaimer or incinerator.

Other Hazards:

No data available

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Components	EINCES	CAS	Concentration	Classification
Modified Epoxy Resin	Polymer	Trade Secret	30% - 50%	Not classified
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	500-033-5	25068-38-6	25% - 45%	H319; H315; H317; H411
Bisphenol F-(epichlorhydrin); epoxy resin—Reaction product	500-108-2	28064-14-4	5% - 15%	H319; H315; H317; H411
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	271-846-8	68609-97-2	5% - 10%	H315; H317
1,3-Butadiene Homopolymer, Epoxidized, Hydroxy-Terminated	Polymer	129288-65-9	5% - 15%	Not classified

SECTION 4 — FIRST AID MEASURES

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes and belts.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms/effects, acute and delayed: Dermal: A component in this mixture has caused allergic skin reactions in humans.

Indication of immediate medical and special treatment needed: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 — FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Extinguishing Media to Avoid: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Do not use direct water stream; may spread fire.

Special hazards arising from the substance or mixture—Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolic compounds. Carbon monoxide. Carbon dioxide. Dense smoke is emitted when burned without sufficient oxygen. Do not breathe fumes.

Further information: Burning liquids may be moved by carefully flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used an extinguishing blanket. Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting

clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures

Environmental precautions: Construct a dike to prevent spreading. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods for cleaning up: Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

Additional advice: None

SECTION 7 — HANDLING AND STORAGE

Handling: Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. See Section 8, Exposure Controls and Personal Protection.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Avoid prolonged high heat and freezing conditions; 5°C ><25°C preferred temperature. Shelf life: 24 months from date of shipment.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure limits: not determined. Derived from product primary content - no effects level:	Acute		Systemic Effects	Local Effects
			Dermal	8.33 mg/kg bw/day
		Inhalation	12.25 mg/m ³	Not Determined
Long-Term				
		Dermal	8.33 mg/kg bw/day	Not Determined
		Inhalation	12.25 mg/m ³	Not Determined

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin and body protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, should be removed and disposed of properly.

Engineering measures: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Special instructions for protection and Wash at the end of each work shift and before eating, smoking or using the toilet. Use good personal hygiene. Do not consume or store food in the work area.

hygiene:

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Color:	Pale yellow
Odor:	Mild
Relative density:	1.05 - 1.15 (water = 1)
Vapor pressure:	No test data available
Freezing Point:	-15 to -5 °C
Auto ignition:	> 300°C
Boiling point/range:	> 100°C (212°F) Decomposes
Flash point:	>252°C (302°F)
Viscosity:	7,500 - 9,500 mPa.s @ 25 °C

SECTION 10 — STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Stable under recommended storage conditions. See Storage, Section 7.
Possibility of Hazardous reactions:	Polymerization will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.
Conditions to avoid:	Avoid short term exposures to temperatures above 300 °C (572 °F). Avoid prolonged exposure to temperatures above 250 °C (482 °F). Potentially violent decomposition can occur above 350 °C (662 °F). Generation of gas during decomposition can cause rapid pressure increase in closed systems.
Incompatible materials:	Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction releases phenolics, carbon monoxide, and water.

SECTION 11 — TOXICOLOGICAL INFORMATION

Ingestion:	Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury. As product: Single dose oral LD50 has not been determined. Estimated: LD50, Rat > 2,000 mg/kg.
Inhalation:	At room temperature, exposure to vapor is minimal due to low volatility. The LC50 has not been determined.
Skin: Contact:	Prolonged or repeated contact may cause skin irritation.
Absorption:	Prolonged skin contact is unlikely to result in absorption of harmful amounts, but may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness
Sensitization:	The dermal LD50 has not been determined. Prolonged skin contact is unlikely to result in absorption of harmful amounts, but may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness The dermal LD50 has not been determined.
Eye irritation:	May cause slight temporary eye irritation. Corneal injury is unlikely.
Repeated Dose Toxicity:	Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.
Chronic Health Hazard:	Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.
Developmental Toxicity:	Based on information for component(s): Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.
Reproductive Toxicity:	For residual liquid epoxy resin: In animal studies, did not interfere with reproduction.

Genetic Toxicity: For the component(s) tested: In vitro genetic toxicity studies were negative in some cases and positive in other cases. For the component(s) tested: Animal genetic toxicity studies were negative.

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity

Modified epoxy resin	No relevant data found		
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	Fish Acute & Prolonged Toxicity	Static renewal LC50 96h, 2 mg/l	Specie: rainbow trout (Oncorhynchus mykiss)
	Aquatic Invertebrate Acute Toxicity	EC50 static, 48h immobilization: 1.8 mg/l	Specie: water flea Daphnia magna
	Aquatic Plant Toxicity	ErC50; 18h: >42.6 mg/l	Specie: Bacteria
	Toxicity to Microorganisms	IC50/ 18h: >42.6 mg/l	Specie: Bacteria
	Aquatic Invertebrates Chronic Toxicity Value	static renewal, 21 d, number of offspring, NOEC: 0.3 mg/l	Specie: water flea Daphnia magna
Bisphenol F-(epichlorhydrin); epoxy resin—Reaction product	For similar material(s):	Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).	
Alkyl(C12-14) glycidyl ether	Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.		
	Fish Acute & Prolonged Toxicity	LC50, static, 96 h: > 5,000 mg/l	Specie: rainbow trout (Oncorhynchus mykiss)
		LC0, , static, 96 h: 1,800 mg/l	Specie: bluegill (Lepomis macrochirus)
	Aquatic Plant Toxicity	EbC50, , Growth inhibition (cell density reduction), 72 h: 843 mg/l	Specie: green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum)
		NOEC, , Growth inhibition (cell density reduction), 72 h: 500 mg/l	Specie: green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum)

Persistence and Degradability

Modified epoxy resin	No relevant data found.			
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.			
	OECD Biodegradation Tests:			
	Biodegradation:	12%	Exposure Time:	28 d
	Method:	OECD 302B Test	10 Day Window:	Not applicable
	Indirect Photo-degradation with OH Radicals:			
	Rate Constant	6.69E-11 cm ³ /s	Atmospheric Half-life	1.92 h
	Method	Estimated	Theoretical Oxygen Demand	2.35 mg/mg
Bisphenol F-(epichlorhydrin); epoxy resin—Reaction product	For similar material(s): Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.			
Alkyl(C12-14) glycidyl ether	Biodegradation under aerobic static laboratory conditions is moderate (BOD20 or BOD28/ThOD between 10 and 40%).			
	OECD Biodegradation Tests:			

	Biodegradation:	87%	Exposure Time:	28 d
	Method:	OECD 301F Test	10 Day Window:	pass
	Chemical Oxygen Demand:	2.09 mg/mg		

Bioaccumulative potential

Modified epoxy resin	No relevant data found.				
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	Moderate:	BCF:	100><3000	Log Pow:	3><5
	Partition Coefficient. n-octanol/water (log Pow):			3.242	Estimated
Bisphenol F-(epichlorhydrin); epoxy resin—Reaction product	Moderate:	BCF:	100><3000	Log Pow:	3><5
	Based on information for a similar material				
Alkyl(C12-14) glycidyl ether	Moderate:	BCF:	100><3000	Log Pow:	3><5
	Partition Coefficient. n-octanol/water (log Pow):			3.77	Shake flask (OECD 107 Test)
	Bioconcentration Factor (BCF):			160	Fish; estimated.

Mobility in soil

Modified epoxy resin	No relevant data found.				
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	Low	Koc	500><2000	Volatilization from natural bodies of water or moist soil is not expected to be an important fate process	
	Partition Coefficient:	1,800 - 4,400 Estimated	Soil organic carbon/water (Koc)		
	Henry's Law Constant (H):	4.93E-05 Pa*m3/mole.; 25 °C			
Bisphenol F-(epichlorhydrin); epoxy resin—Reaction product	No relevant data found.				
Alkyl(C12-14) glycidyl ether	Relatively mobile	Koc	>5000		
	Partition Coefficient:	>5000 OECD 121 /HPLC method	Soil organic carbon/water (Koc)		
	Henry's Law Constant (H):	1.12E-02 atm*m3/mole Estimated.			

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste from residues and unused products:

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 91/689/EEC. Do not dump into any sewers, on the ground, or into any body of water. Parts A and B thoroughly mixed in a ratio range between 1:1 to 2.5:1 will cure to an inert material in one to three days that may be disposed of appropriately.

Contaminated packaging:

Dispose of container and unused contents in accordance with federal, state, and local requirements.

Comply with all national and provincial laws and any municipal or local by-laws governing hazardous waste.

For Unused & Uncontaminated Product, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device.

As your supplier, we have no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in SDS Section 3 --Composition.

SECTION 14 — TRANSPORT INFORMATION

Road and Rail

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)		
Class: 9	Kemler Code: 90	Tremcard No.: 90GM6-III

Ocean

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)		
Class: 9	UN/ID Number: UN3082	Packing Group: III
EMS Number: F-A,S-F	Marine Pollutant: Yes	

Air

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)		
Class: 9	UN/ID Number: UN3082	Packing group: III
Passenger Packing Instructions: 914		

Inland Waterways

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)		
Class: 9	UN/ID Number: UN3082	Packing group: III
	Kemler Code: 90	Tremcard Number: 90GM6-III
Environmental Hazard: Yes		

SECTION 15 — REGULATORY INFORMATION

Labeling according to EEC Directive(s) and OSHA 40 CFR 1910.1200

Hazard Statements (H-phrases):

H319: (Causes serious eye irritation), Warning, GHS07
 H315: (Causes skin irritation), Warning, GHS07
 H317: (May cause an allergic skin reaction), Warning GHS07
 H411: (Toxic to aquatic life with long lasting effects), GHS09

Precautionary Statements (P-phrases):

P202: Do not handle until all safety precautions have been read and understood.
 P262: Do not get in eyes, on skin, or on clothing
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P302+P352: IF ON SKIN: Wash with soap and water
 P305+351+338: IF IN EYES: Rinse continuously 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
 P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P308 + P313: If exposed or concerned: Get medical advice/attention.
 P273: Avoid release to the environment
 P391: Collect spillage

Contains:

P501: Dispose of contents/container to: Send to a licensed recycler, reclaimer or incinerator.
 Bisphenol A Diglycidyl Ether, epoxy resin (average Molecular Weight <= 700)
 Reaction product: Bisphenol F-(epichlorhydrin); epoxy resin
 Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.
 1,3-Butadiene Homopolymer, Epoxidized, Hydroxy-Terminated

Food contact:

This resin will NOT comply with the U.S. Food, Drugs and Cosmetics Act as amended under Food Additive Regulation 21 CFR 175.300.

Regulatory list

USA:	TSCA	All contents are in compliance under 40 CFR 720.30 – included on the TSCA Inventory or are exempt from TSCA Inventory.
EU:	EINECS NLP	500-033-5 / 500-108-2 / 271-846-8; Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada:	DSL	25085-99-8
Australia:	AICS	25085-99-8
Japan:	ENCS	7-1279
South Korea:	KECI	KE-24083

Philippines	PICCS	25085-99-8
China:	SEPA	25085-99-8

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III

(Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III

(Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act):

Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act):

Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

SECTION 16 — OTHER INFORMATION

Document information

Prepared by: Blue Robotics, Inc., Engineering Department
Document Issue: Sept 18, 2018 Rev A

For additional information, please visit our web site at www.bluerobotics.com for the product data sheet.

This Safety Data Sheet has been established in accordance with the applicable OSHA and European Directives and applies to all countries that have translated the Directives in their national laws.

RELTEK LLC and Blue Robotics Inc. urge each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.