

CircuitMedic, 22 Parkridge Road, Haverhill, MA 01835 USA
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Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Circuit Bond - Resin
Product Number:	115-3302
UFI Number:	P321-AAMU-S30E-T3VS
Recommended use:	This general-purpose adhesive is packaged in a two-part plastic package. The components are mixed just before use. There are no identified uses advised against. The components include: 115-3302 Circuit Bond - Resin 115-3302 Circuit Bond - Hardener
Supplier:	CircuitMedic 22 Parkridge Road, Haverhill, MA 01835 USA PHONE: 978-373-1600, FAX: 978-372-5700
Emergency Response:	For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 CCN4877 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

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Section 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

Hazard pictograms:**Signal Words:**

DANGER

GHS Class:

Carcinogenicity, category 2; Germ cell mutagenicity, category 2; Eye Irritation, category 2; Skin Irritation, category 2; Skin Sensitization, category 1
 Specific Target Organ Toxicity - STOT, Single Exposure SE. Category 3 (Respiratory tract irritation).
 Hazardous to the aquatic environment, long-term, chronic, category 2

Hazard Statements:

H351 - Suspected of causing cancer. , H341 - Suspected of causing genetic defects. , H319 - Causes serious eye irritation. , H315 - Causes skin irritation. , H317 - May cause an allergic skin reaction. , H335 - May cause respiratory irritation. , H411 - Toxic to aquatic life with long-lasting effects.

Precautionary Statements:

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/vapours/spray.
 P264 - Wash hands thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P304+P340 - IF INHALED: Remove victim to fresh air in a position 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.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P391 - Collect spillage.
 P403+P233 - Store in a well-ventilated place. Keep the container tightly closed.
 P405 - Store locked up.
 P501 - Dispose of in accordance with Local, State, Federal, and Provincial regulations.

Hazards not classified:

None known.

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Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substance				
Not applicable				
3.2 Mixtures				
Chemical/Ingredient Name	CAS Number	Ingredient Percent	EC Number	Comments
N-butyl Glycidyl Ether	2426-08-6	10 - 15	219-376-4	-
Bisphenol A/epiclorohydrin Resin	25068-38-6	80 - 90	500-033-5	-

Section 4. FIRST-AID MEASURES

4.1 Description of first aid measures	
Eye Contact:	Immediately flush eyes with plenty of water for 15 to 20 minutes. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
4.2. Most important symptoms and effects, both acute and delayed	
None	
4.3 Indication of any immediate medical attention and special treatment needed	
No additional information.	

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Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media	
Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable Media:	None.
5.2 Special hazards arising from the substance or mixture	
Hazardous Combustion Byproducts:	Oxides of carbon, aldehydes, amines, aniline, acids and other organic substances may be formed during combustion. The chemical nature and quantity of decomposition by-products will vary widely depending on the conditions of combustion.
Unusual Fire Hazards:	Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.
5.3 Advice for firefighters	
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
NFPA Health:	2
NFPA Fire:	1
NFPA Reactivity:	1

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Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.
6.2 Environmental precautions	
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
6.3 Methods and material for containment and cleaning up	
Methods for Containment:	For small spills, activate available exhaust ventilation equipment in the immediate spill area. Wipe up or absorb spilled material with paper towels or other absorbent material. For large spills, dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters.
Methods for Cleanup:	For small spills, wash area with soapy water to remove residue. Collect absorbed material and water rinses in appropriate containers. Dispose of in accordance with Federal, State and local regulations. For large spills, recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed thoroughly wet vacuum the area. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal. Do not flush to sewer.
Other Spill Precautions:	Spill response operations must be conducted in accordance with the provisions of OSHA 29 CFR 1910.120. Review the entire SDS before proceeding with spill response.
6.4 Reference to other sections	
Use proper personal protective equipment as listed in Section 8.	

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling	
Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Avoid contact with eyes, skin, or clothing. Avoid prolonged or repeated contact with skin. Keep container tightly closed when not in use.
Special Handling:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
Hygiene Practices:	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using restroom facilities. Promptly remove contaminated clothing and launder thoroughly before reuse.
7.2 Conditions for safe storage, including any incompatibilities	
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not reuse empty containers. Keep out of the reach of children.
7.3. Specific end use(s)	
No additional information.	

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Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters	
Exposure Guidelines	
N-butyl Glycidyl Ether:	
ACGIH:	Sensitizer, Skin: Sensitizer, Skin
OSHA:	PEL-TWA: 50 ppm
8.2 Exposure controls	
Appropriate engineering controls	
Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Individual protection measures	
Eye Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of respirators.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Hygiene Practices:	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using restroom facilities. Promptly remove contaminated clothing and launder thoroughly before reuse.

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Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical State:	Liquid.
Color:	Clear amber
Odor:	Not determined.
pH:	Not determined.
Melting Temperature:	Not determined.
Boiling Temperature:	Not determined.
Flash Point:	164 °F
Flash Point Method:	Not determined.
Ignition Temperature:	Not determined.
Lower Flammable Limit:	Not determined.
Upper Flammable Limit:	Not determined.
Vapor Pressure:	Not determined.
Vapor Density:	Not determined.
Solubility:	Slightly soluble.
Specific Gravity:	(Ref: water = 1).
Evaporation Rate:	Not determined.
VOC Content:	Not determined.
Viscosity:	Not determined.
Odor Threshold:	Not determined.
9.2 Other information	
None available.	

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Section 10. STABILITY AND REACTIVITY

10.1 Reactivity	
Reactivity:	Stable under normal handling and storage conditions.
10.2 Chemical Stability	
Chemical Stability:	Stable under normal temperatures and pressures.
10.3 Possibility of hazardous reactions	
Hazardous Polymerization:	It will not vigorously polymerize, decompose, condense or not become self-reactive under conditions of shocks, pressure, or temperature. Uncontrolled mixing with resins may cause hazardous polymerization.
10.4 Conditions To Avoid	
Conditions To Avoid:	Contact with acidic, basic, or oxidizing materials. Exposure to open flame or uncontrolled heat, uncontrolled mixing or exposure to incompatible substances. Avoid storage in open containers.
10.5 Incompatible Materials	
Incompatible Materials:	Acidic, basic or oxidizing materials.
10.6 Hazardous decomposition products	
None known.	

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Section 11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Bisphenol A/epichlorohydrin Resin:**

Eye Toxicity:	Administration into the eye - Rabbit Standard Draize test: 100 mg [Mild] Administration into the eye - Rabbit Standard Draize test: 20 mg/24H [Moderate] Administration into the eye - Rabbit Standard Draize test: 5 mg/24H [Severe] (RTECS)
Skin Toxicity:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 mL/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rat LD50 - Lethal dose, 50 percent kill: >1200 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion Toxicity:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 10700 uL/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 13600 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain] Oral - Rat LD50 - Lethal dose, 50 percent kill: 13.6 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 11.4 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain] Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: >1 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rat LD50 - Lethal dose, 50 percent kill: 11400 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain] (RTECS)

N-butyl Glycidyl Ether:

Eye Toxicity:	Administration into the eye - Rabbit Standard Draize test: 91 mg [Mild] Administration into the eye - Rabbit Standard Draize test: 750 ug/24H [Severe] (RTECS)
Skin Toxicity:	Administration onto the skin - Rat LD50 - Lethal dose, 50 percent kill: >2150 mg/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 2520 uL/kg [Details of toxic effects not reported other than lethal dose value](RTECS)
Ingestion Toxicity:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 1660 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)
Inhalation Toxicity:	Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 1030 ppm/8H [Sense Organs and Special Senses (Eye) - Lacrimation Gastrointestinal - Changes in structure or function of salivary glands Lungs, Thorax, or Respiration - Dyspnea] (RTECS)

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity	
Ecotoxicity:	No ecotoxicity data was found for the product.
12.2 Persistence and degradability	
Environmental Fate:	No environmental information found for this product.
12.3 Bioaccumulative potential	
No data available.	
12.4 Mobility in soil	
No data available.	

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	
Waste Disposal:	Use standard landfill methods consistent with applicable Federal, State, Provincial and local laws. Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

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Section 14. TRANSPORT INFORMATION

14.1 UN Number:	UN3082
14.2 UN proper shipping name:	Amines, liquid, corrosive, n.o.s.
14.3. Transport hazard class(es):	9
14.4 Packing group:	III
14.5 Environmental hazards	Environmentally hazardous substance, liquid, n.o.s.
14.6 Special precautions for user	None.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
DOT Shipping Name:	Amines, liquid, corrosive, n.o.s.
DOT UN Number:	UN3082
DOT Shipping Name:	Amines, liquid, corrosive, n.o.s.
DOT Hazard Class	9
DOT Packing Group:	III
IMDG Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
IMDG UN Number:	UN3082
IMDG Hazard Class:	9
IMDG Packing Group:	III
IATA Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
IATA UN Number:	UN3082
IATA Hazard Class:	III
IATA Subrisk:	9
Notes from Section 14:	The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment. This classification applies only to transportation classification and not the packaging, labeling, or marking requirements. The shipper is responsible for complying with all applicable laws and regulations, including proper transportation classification, packaging, and labeling.

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Section 15. REGULATORY INFORMATION

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

EU legislation:	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
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Regulatory - Ingredient Based:

N-butyl Glycidyl Ether:

Canada DSL:	Listed
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TSCA Inventory Status:	Listed
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EC Number:	219-376-4
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Bisphenol A/epichlorohydrin Resin:

Canada DSL:	Listed
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TSCA Inventory Status:	Listed
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EC Number:	500-033-5
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15.2 Chemical safety assessment

Product does not contain controlled chemicals listed in Table I and Table II of the 1988 UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances .

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Section 16. OTHER INFORMATION

HMIS:	Health	2
	Flammability	1
	Reactivity	1
	PPE	X
NFPA		

To the best of our knowledge, the information contained herein is accurate. However, neither Circuit Technology Center, Inc., nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. The final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.