Alpha Resources Inc.
Safety Data Sheet (SDS)

EPON™ Resin 815C

SDS #32
Revision Date 4/2/15

1. Product and company identification

Product name EPON™ Resin 815C

Use For industrial purposes only.

Internal code AM1163, AM1164

Product Type Epoxy Resin

Manufacturer, Importer, Supplier

Alpha Resources Inc.

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Telephone

For Emergency Medical Assistance
Call Health & Safety Information Services, 1-866-303-6949

For Emergency Transportation Information
CHEMTREC US Domestic (800) 424-9300
CHEMTREC International (703) 527-3887
CANUTEC CA Domestic (613) 996-6666

2. Hazards identification

Form Liquid

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview

WARNING !
COMBUSTIBLE LIQUID AND VAPOR. MAY FORM EXPLOSIVE MIXTURES WITH AIR. TOXIC IF INHALED. HARMFUL IN CONTACT WITH SKIN OR IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.

Potential acute health effects

Inhalation Irritating to respiratory system. Toxic if inhaled.

Ingestion Harmful if swallowed.

Skin Harmful in contact with skin. Severely irritating to the skin. May cause sensitization by skin contact.

Eyes Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects Contains material that may cause target organ damage, based on animal data.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity Contains material which may cause heritable genetic effects.

Teratogenicity Contains material which may cause birth defects, based on animal data.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Target organs Contains material which causes damage to the following organs: blood, upper respiratory tract, skin, eyes, central nervous system (CNS), Review Section 2 and 11 for any additional assessments.

Over-exposure signs/symptoms

Inhalation Adverse symptoms may include the following: respiratory tract irritation, coughing,

Ingestion No specific data.

Skin Adverse symptoms may include the following: irritation, redness,

Eyes Adverse symptoms may include the following: pain or irritation, watering, redness,

Medical conditions aggravated by over-exposure Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/Information on ingredients

Ingredient name	CAS number	WT %
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	25068-38-6	**70.0 - 100.0**
Oxirane, 2-(butoxymethyl)-	2426-08-6	**10.0 - 30.0**

*** Any applicable trade secret numbers will be listed in Section 15.*

4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first aid personnel	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Flammability of the product	Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable	Use dry chemical, CO2, water spray (fog) or foam.
Not suitable	Do not use water jet.

Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Hazardous combustion products	Decomposition products may include the following materials: carbon oxides,
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.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Large spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an 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 (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via 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 and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Follow US NFPA 30, "Flammable & Combustible Liquids Code", or other national, state and local codes on safe handling of flammable liquids. Train workers in the recognition and prevention of hazards associated with the storage, handling and transfer of flammable liquids in the plant. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in an area designated for storage of flammable liquids (See NFPA 30 and OSHA 29 CFR 1910.106). Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient name	Occupational exposure limits
Oxirane, 2-(butoxymethyl)-	**ACGIH TLV Time Weighted Average (TWA)** 3 ppm **OSHA PEL Time Weighted Average (TWA)** 270 mg/m3 50 ppm

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.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

Information on basic physical and chemical properties

Appearance		
Physical state	:	Liquid
Color	:	Yellow
Odor	:	Not available
Odor threshold	:	Not available
pH	:	Not available
Boiling point	:	Not available
Flash point	:	73 °C (163 °F) Setaflash Closed Cup ASTM D 3828
Evaporation rate	:	Not available
Flammable limits		
Upper:	:	Not available
Lower:	:	Not available
Vapor pressure	:	400 Pa @25 °C (77 °F) (Solvent)
Vapor density	:	4.5
Relative density	:	1.13

Solubility	:	Negligible
Partition coefficient: n-octanol/water	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
Typical % solids	:	Not available

Other information Not applicable.

10. Stability and reactivity

Reactivity	Stable under normal conditions.
Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Avoid exposure - obtain special instructions before use.
Materials to avoid	Reactive or incompatible with the following materials: strong oxidizing agents, strong acids, strong alkalis, aliphatic amines,
Other hazards	Reacts with considerable heat release with some curing agents. Heating this substance above 300 deg. F in the presence of air may cause slow oxidative decomposition; above 500 deg. F polymerization may occur. Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials: carbon monoxide, aldehydes, acids,

11. Toxicological information

Acute toxicity

Ingredient name

4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer			
	LD50 Oral	Rat	30,000 mg/kg
	LD50 Dermal	Rat	> 2,000 mg/kg
Oxirane, 2-(butoxymethyl)-			
	LD50 Oral	Rat	1,660 mg/kg
	LD50 Oral	Mouse	1,530 mg/kg
	LD50 Dermal	Rat	> 2,150 mg/kg

Other Toxicological Information

Carcinogenicity

Classification

Ingredient name

4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer

ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not classified

Oxirane, 2-(butoxymethyl)-

12. Ecological information

Environmental effects

No known significant effects or critical hazards.

Other adverse effects

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory information	UN/NA number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR	1993	COMBUSTIBLE LIQUID, N.O.S. (Oxirane, 2-(butoxymethyl)-)	Class CBL III	
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

Not regulated by D.O.T. if in a container of 119 gallon capacity or less.

*PG : Packing group

15. Regulatory information

US regulations

HCS Classification Combustible liquid, Toxic material, Irritating material, Sensitizing material, Target organ effects

U.S. Federal regulations	**SARA 311/312 Classification** Immediate (acute) health hazard, Delayed (chronic) health hazard, Fire hazard
	SARA 313 - Supplier Notification This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372. None required.
	SARA 302 Extremely Hazardous Substances None required.
State regulations	**Massachusetts RTK Substances** The following components are listed: Oxirane, 2-(butoxymethyl)-,
	New Jersey RTK Hazardous Substances The following components are listed: Oxirane, 2-(butoxymethyl)-,
	Pennsylvania RTK Hazardous Substances The following components are listed: Oxirane, 2-(butoxymethyl)-,
	California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Oxirane, (phenoxymethyl)- **-** 122-60-1, Epichlorohydrin **-** 106-89-8,
Canada **WHMIS (Canada)**	Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).
Canadian lists	**Canadian NPRI:** None required.

International regulations

Chemical inventories	Europe inventory All components are listed or exempted. Australia inventory (AICS) All components are listed or exempted. China inventory (IECSC) All components are listed or exempted. Japan inventory (ENCS) All components are listed or exempted. Japan inventory (ISHL) Not determined. Korea inventory (KECI) All components are listed or exempted. New Zealand Inventory (NZIoC) Not determined. Philippines inventory (PICCS) All components are listed or exempted. Canada inventory All components are listed or exempted. United States inventory (TSCA 8b) All components are listed or exempted.

16. Other information

Hazardous Material	Health : 2
Information System III	Flammability: 2
(U.S.A.)	Physical hazards : 0

Chronic : *

The data and information as stated was furnished by the manufacturer/vendor/supplier of this product. Alpha Resources Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.