

Health	2
Flammability	1
Reactivity	0
Protective Equipment	E

## SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY INFORMATION	
<b>MANUFACTURER'S NAME</b> Barker Microfarads	<b>EMERGENCY TELEPHONE NUMBER</b> (276) 728-9121
<b>ADDRESS (Number, Street, City, State, and Zip)</b> P.O. Box 697 205 Mill Street Hillsville, VA 24343	<b>CHEMICAL NAME AND SYNONYMS</b>
	<b>TRADE AND SYNONYMS</b> A-66
	<b>CHEMICAL FAMILY FORMULA</b> Electrolyte
<b>MATERIAL USES</b> Electrolyte for use in Aluminum Electrolytic Capacitors	

SECTION 2 – HAZARDS IDENTIFICATION
WARNING! FLAMMABLE. Keep away from open flame. WARNING! IRRITANT. May be irritating to skin and mucous membranes.

<b>Odor:</b> Mild	<b>Physical State:</b> Liquid	<b>Appearance:</b> No information available	<b>Color:</b> Clear, Colorless
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### POTENTIAL HEALTH EFFECTS

**Principal Routes of Exposure:**  
Ingestion, Skin, Eyes, Inhalation

**Acute Potential Health Effects**

**Eye Contact:**

May cause discomfort in the eye with transient conjunctivitis. Serious corneal injury is not anticipated.

**Ingestion:**

May cause discomfort or pain, dizziness, malaise, lumbar pain, oliguria, uremia, central nervous system depression, persistent vomiting and diarrhea, followed by profound shock and coma. Severe kidney damage follows swallowing large amounts.

**Inhalation:**

May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations may cause nausea, vomiting, headache, and dizziness.

**Chronic Potential Health Effects:**

Component	Carcinogen Status	Teratogenic Effects	Mutagenic Effects	Developmental Toxicity
Ethylene Glycol	No Information Available	May cause adverse reproductive effects and birth defects based on animal test data	Mutagenic for mammalian somatic cells	No Information Available
Inorganic Salt of	No Information	No Information Available	Mutagenic for bacteria	Classified

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Boric Acid	Available		and/or yeast	reproductive system/toxin/female, reproductive system/toxin/male
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### SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Components	TLV (Units)
Ethylene Glycol	50ppm
Inorganic Salt of Boric Acid	N/A

**Threshold Limit Value:** For vapor and mist combined, based on ethylene glycol; 50ppm ceiling (ACGIH 1984-85)

### SECTION 4 – FIRST AID MEASURES

General Advice:	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect him/herself.
Ingestion:	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Skin Contact:	Remove contaminated clothing and flush skin with water.
Inhalation:	Move to fresh air. Call a physician if discomfort persists.
Eye Contact:	Immediately flush with water and continue washing the eyes for several minutes.

### SECTION 5 – FIRE-FIGHTING MEASURES

<b>Flashpoint</b> (Closed Cup; ASTM D-56) >212°F	<b>Lower Explosion Limit</b> N/A	<b>Upper Explosion Limit</b> N/A
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**Extinguishing Media:** Alcohol foam, water, water foam, carbon dioxide, dry chemical, carbon tetrachloride.

**Special Fire-Fighting Procedures:** Do not spray pool fires directly with a solid stream of water or foam, as this can cause frothing. Use self-contained breathing apparatus and protective clothing.

**Unusual Fire and Explosion Hazards:** None

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Ensure adequate ventilation. If TLV is exceeded, wear NIOSH approved breathing air equipment or NIOSH approved face mask with organic vapor cartridge and dust or mist pre-filter. Keep people away from spill/leak. Use personal protective equipment. Remove all sources of ignition.

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**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Small spills should be flushed with large quantities of water. In case of a large spill, dike if needed. Larger spills should be collected for disposal.

**Methods for Cleaning Up:** Absorb spill with inert material. Contaminated absorbent may be deposited in a landfill or incinerated in a furnace in accordance with local, State, and Federal regulations. Clean contaminated surface thoroughly.

## SECTION 7 – HANDLING AND STORAGE

### Handling

**Technical Measures/Precautions:** General exhaust is useful; local exhaust is advisable for elevated temperature use. If TLV is exceeded, respiratory protection must be used (See Section 8). Remove all sources of ignition. Keep away from incompatible materials.

**Safe Handling Advice:** Wear personal protective equipment. Use respiratory protection if TLV is exceeded. Avoid contact with eyes, skin, and clothing. Do not ingest. Keep away from open flame. Do not smoke when using. Handle in accordance with good industrial hygiene and safety practice.

### Storage

**Technical Measures/Conditions:** Keep container closed in a dry place. Store at room temperature. Keep away from high temperatures and open flame. Store away from incompatible materials. Containers of this material may be hazardous when emptied. Since emptied containers retain product residue (vapor, liquid, and/or solid) all hazard precautions given in this data sheet must be observed.

**Incompatible Materials:** Normally unreactive, however avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Measures:** Local exhaust is advisable for elevated temperature use. General mechanical exhaust is useful to keep the airborne concentrations of vapor and mist below the threshold limit value.

### Personal Protective Equipment

**Eye Protection:** Monogoggles/face shield.

**Skin Protection:** Rubber or polyvinyl chloride coated gloves.

**Respiratory Protection:** If TLV is exceeded, use NIOSH approved breathing air equipment or NIOSH approved face mask with organic vapor cartridge and dust or mist pre-filter.

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**Hygiene Measures:**

Avoid contact with skin, eyes, and clothing. When using, do not eat, drink, or smoke. Wash hands thoroughly before breaks and immediately after handling the product.

Components	OSHA	NIOSH	ACGIH
Ethylene Glycol	50ppm TWA	No Data	50ppm, 127 mg/m <sup>3</sup> TWA
Inorganic Salt of Boric Acid	15mg/m <sup>3</sup> TWA	No Data	2mg/m <sup>3</sup> TWA

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:**

Liquid

**Appearance:**

No information available

**Color:**

Clear, Colorless

**Odor:**

Mild

**Boiling Point:**

268°-273°

**Specific Gravity (g/cm<sup>3</sup>):**

1.15

**Evaporation Rate:**

&lt;&lt;1

**pH:**

No information available

**Vapor Density:**

N/A

**Freezing Point:**

No information Available

**Autoignition Temperature:**

No information available

**Vapor Pressure:**

No information available

**Upper Explosion Limit (%):**

No information available

**Lower Explosion Limit (%):**

No information available

**Flash Point:**

&gt;212°F (Closed Cup)

**Relative Density:**

No information available

**Partition Coefficient (n-octanol/water):**

No information available

**Decomposition Temp:**

No information available

**Odor Threshold:**

No information available

**Solubility in Water:**

Completely Soluble

## SECTION 10 – STABILITY AND REACTIVITY

**Stability:**

Stable

**Conditions to Avoid:**

High temperatures. Open flame. Incompatible materials.

**Materials to Avoid:**

Strong bases at high temperatures. Strong acids. Strong oxidizing agents. Materials reactive with hydroxyl compounds.

**Hazardous Decomposition Products:**

Burning may produce carbon, carbon monoxide, and/or carbon dioxide.

**Possibility of Hazardous Reactions:**

None known.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**NOTICE:** THIS STANDARD CONTAINS PROPRIETARY INFORMATION OF BARKER MICROFARADS, AND IS NOT TO BE REPRODUCED BY ANY METHOD FOR EXTERNAL DISTRIBUTION WITHOUT PRIOR APPROVAL OF A COMPANY OFFICER.

**Acute Toxicity:** Acute oral toxicity (LD50): 4700 mg/kg [Rat]. Acute toxicity of the vapor (LC50): >200 mg/m<sup>3</sup> 4 hours [Rat]; based on Ethylene Glycol.

**Local Effects**

**Skin Irritation:** Cause skin irritation. A single prolonged exposure is unlikely to result in the material being absorbed through the skin in harmful amounts. Massive contact with damaged skin may result in absorption of potentially harmful amounts.

**Eye Irritation:** May cause discomfort in the eye with transient conjunctivitis. Serious corneal injury is not anticipated.

**Inhalation:** May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations may cause nausea, vomiting, headache, and dizziness.

**Ingestion:** May cause discomfort or pain, dizziness, malaise, lumbar pain, oliguria, uremia, central nervous system depression, persistent vomiting and diarrhea, followed by profound shock and coma. Severe kidney damage follows swallowing large amounts. Behavior/central nervous system can be affected within 0.5 to 12 hours after ingestion. A transient inebriation with excitement, stupor, headache, slurred speech, ataxia, somnolence, and euphoria can occur within the first several hours. At it is metabolized, metabolic acidosis and further central nervous system depression (convulsions, muscle weakness) develop. Serious intoxication may develop to coma associated with hypotonia, hyporeflexia, and less commonly seizures and meningismus within 12 to 24 hours.

**Chronic Effects**

Component	Carcinogen Status	Teratogenic Effects	Mutagenic Effects	Developmental Toxicity
Ethylene Glycol	No Information Available	May cause adverse reproductive effects and birth defects based on animal test data	Mutagenic for mammalian somatic cells	No Information Available
Inorganic Salt of Boric Acid	No Information Available	No Information Available	Mutagenic for bacteria and/or yeast	Classified reproductive system/toxin/female, reproductive system/toxin/male

**SECTION 12 – ECOLOGICAL INFORMATION**

**Ecotoxicity:** No information available

**Persistence and Degradability:** No information available

**Bioaccumulative Potential:** No information available

**Mobility:** No information available

**Other Adverse Effects:** No information available

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## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste from Residues / Unused Products:** Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid) all hazard precautions given in this data sheet must be observed. Waste must be disposed of in accordance with Federal, State, and Local regulations.

## SECTION 14 – TRANSPORT INFORMATION

**UN Number:** Not applicable.

**UN Proper Shipping Name:** Not applicable.

**Transport Hazard Class(es):** Not a DOT controlled material.

**Packing Group:** Not applicable.

**Marine Pollutant:** Not applicable.

**Special Precautions:** Not applicable.

## SECTION 15 – REGULATORY INFORMATION

### Federal and State Regulations:

#### *Ethylene Glycol*

**Illinois Toxic Substances Disclosure to Employee Act:** Present  
**Illinois Chemical Safety Act:** Present  
**New York Release Reporting List:** Present  
**Rhode Island RTK Hazardous Substances:** Present  
**Pennsylvania RTK:** Present  
**Minnesota:** Present  
**Massachusetts RTK:** Present  
**Massachusetts Spill List:** Present  
**New Jersey:** Present  
**Louisiana Spill Reporting:** Present  
**TSCA 8(b) inventory:** Ethylene Glycol  
**TSCA 4(a) Proposed Test Rules:** Ethylene Glycol  
**SARA 313 Toxic Chemical Notification and Release Reporting:** Present  
**CERCLA - Hazardous Substances and Reportable Quantity:** Ethylene Glycol: 5,000lbs.

#### *Inorganic Salt of Boric Acid*

**TSCA 8(b) Inventory:** Boric Acid

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**Other Regulations:**

*Ethylene Glycol*

**OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**ENEICS:** This product is on the European Inventory of Existing Commercial Chemical Substances.

**WHMIS (Canada):** Class D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):** R-22: Harmful if swallowed. S-46: If swallowed, seek medical advice immediately and show this container or label.

*Inorganic Salt of Boric Acid*

**OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**WHMIS (Canada):** Class D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):** R36/38 – Irritating to eyes and skin. R40 – Possible risks of irreversible effects. R62 – Possible risk of impaired fertility. S24/25 – Avoid contact with skin and eyes.

**HMIS (UISA):**

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

**National Fire Protection Association (USA):**

Health: 1

Flammability: 1

Reactivity: 0

Specific Hazard:

Protective Equipment: Gloves, lab coat, dust respirator, splash goggles. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

**SECTION 16 – OTHER INFORMATION**

Preparation Date: February 1, 1988

Revision Date: November 8, 2013

Reason for Revision: To comply with ANSI Z400.1 Standards

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