

# MATERIAL SAFETY DATA SHEET



6103 Orthoway  
Fort Madison, Iowa 52627

Emergency Number 800-346-7237

Cryotech E36<sup>®</sup> LRD (LRD = Liquid Runway Deicer)  
This Material Safety Data Sheet contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS. Discard any previous edition of this MSDS.

Revision Date: August 2001

## 1. PRODUCT IDENTIFICATION

### **Cryotech E36<sup>®</sup> LRD**

**CAUTION! – MAY CAUSE EYE IRRITATION**

PRODUCT INFORMATION: (800)346-7237

## 2. FIRST AID MEASURES

EMERGENCY NUMBER (24 hr): 1-800-346-7237

### **EYE CONTACT:**

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. No additional first aid should be necessary. However, if irritation persists, see a doctor.

### **SKIN CONTACT:**

No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

### **INHALATION:**

Since this material is not expected to be an immediate inhalation problem, no first aid procedures are required.

### **INGESTION:**

If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

## 3. IMMEDIATE HEALTH EFFECTS

(also see Sections 11 and 12)

### **EYE CONTACT:**

This substance is slightly irritating to the eyes and could cause prolonged (days) impairment of your vision. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment. Signs and symptoms may include pain, tears, swelling, redness, and blurred vision.

### **SKIN IRRITATION:**

This substance is not expected to cause prolonged or significant skin irritation.

### **DERMAL TOXICITY:**

The systematic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if it gets on the skin.

### **RESPIRATORY/INHALATION:**

This material does not present an inhalation hazard.

### **INGESTION:**

If swallowed, this substance is considered practically non-toxic to internal organs. Ingestion may cause irritation of the digestive tract which may result in nausea, vomiting and diarrhea.

## 4. PROTECTIVE EQUIPMENT

### **EYE PROTECTION:**

Do not get this material in your eyes. Eye contact can be avoided by wearing chemical goggles.

### **SKIN PROTECTION:**

No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing.

### **RESPIRATORY PROTECTION:**

No special respiratory protection is normally required.

### **VENTILATION:**

No special ventilation is necessary.

## 5. FIRE FIGHTING MEASURES

FLASH POINT: NA

AUTOIGNITION: NA

FLAMMABILITY LIMITS (% by volume in air):

Lower: NA Upper: NA Non-flammable

EXTINGUISHING MEDIA:

NA – Material is not flammable

FIRE FIGHTING PROCEDURES:

This material normally will not burn.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor.

NFPA RATINGS:

Health 1; Flammability 0; Reactivity 0; Special NDA: (Least - 0, Slight -1, Moderate - 2, High - 3, Extreme - 4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint Coating Association.

## 6. STORAGE, HANDLING, AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

None known.

STABILITY:

Stable.

HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

INCOMPATIBILITY:

May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc. Avoid prolonged contact with reactive metals such as magnesium and zinc, especially in closed systems where hydrogen gas may accumulate over time.

SPECIAL PRECAUTIONS:

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

Store away from strong oxidizing materials.

NDA – No Data Available NA – Not Applicable MSDS Number: 118

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200) by Cryotech Deicing Technology, A Division of General Atomics International Services Division, 6103 Orthoway, Fort Madison, IA 52627

# MATERIAL SAFETY DATA SHEET

## 7. PHYSICAL AND CHEMICAL PROPERTIES

SOLUBILITY: Completely miscible in water.  
APPEARANCE: Clear, colorless to light straw colored liquid.  
(May be dyed blue at customer request)  
BOILING POINT: 100°C (approximately)  
MELTING POINT: -40°C  
EVAPORATION: NDA  
SPECIFIC GRAVITY: 1.28 @ 20°C  
VAPOR PRESSURE: NDA  
PERCENT VOLATILE (VOLUME %): NDA  
VAPOR DENSITY (AIR = 1): NDA  
VISCOSITY: 6.5 cP @ 20°C

## 8. ENVIRONMENTAL CONCERNS, SPILL RESPONSE AND DISPOSAL

EMERGENCY NUMBER (24 hr): 1-800-346-7237

### SPILL/LEAK PRECAUTIONS:

This material is not expected to be toxic to aquatic organisms.  
This material is not expected to present any environmental problem.

### DISPOSAL METHODS:

Based on information available to Cryotech Deicing Technology, this product is neither listed as a hazardous waste nor does it exhibit any of the characteristics that would cause it to be classified or disposed of as a RCRA hazardous waste.

If product should spill or be otherwise unsuitable for normal antifreeze applications, it may be disposed of in sanitary landfill unless state or local regulations prohibit such disposal.

## 9. EXPOSURE STANDARDS, REGULATORY LIMITS AND COMPOSITION

The percent compositions are given to allow for the various ranges of the components present in the whole product and may not equal 100%.

PERCENT/CAS#	COMPONENT/REGULATORY LIMITS
100%	Cryotech E36 <sup>®</sup> LRD
CONTAINING	
50%	POTASSIUM ACETATE
CAS127082	
	AND
< 1.0%	CORROSION INHIBITORS IN
50%	WATER
CAS7732185	

TLV - Threshold Limit Value	TWA - Time Weighted
STEL - Short-term Exposure Limit	Average
RQ - Reportable Quantity	TPQ - Threshold Planning
CAS - Chemical Abstract	Quantity
Service Number	CPS - CUSA Product Code

## 10. REGULATORY INFORMATION

### DOT SHIPPING NAME:

NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT

NDA - No Data Available NA - Not Applicable MSDS Number: 118

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, *Cryotech Deicing Technology, a Division of General Atomics International Services Corporation makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon.* Cryotech Deicing Technology, a Division of General Atomics International Services Corporation assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

### DOT HAZARD CLASS:

NOT APPLICABLE

### DOT IDENTIFICATION NUMBER:

NOT APPLICABLE

### SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects:	Yes
2. Delayed (Chronic) Health Effects:	No
3. Fire Hazard:	No
4. Sudden Release of Pressure Hazard:	No
5. Reactivity Hazard:	No

### REGULATORY LISTS SEARCHED:

01 = SARA 313	02 = MASS RTK
03 = NTP Carcinogen	04 = CA Prop. 65
05 = MI 406	06 = IARC Group 1
07 = IARC Group 2A	08 = IARC Group 2B
09 = SARA 302/304	10 = PA RTK
11 = NJ RTK	12 = CERCLA 302.4
13 = MN RTK	14 = ACGIHTLV
15 = ACGIH STEL	16 = ACGIH Calculated TLV
17 = OSHATWA	18 = OSHA STEL
20 = EPA Carcinogen	21 = TSCA Sect 4(e)
22 = TSCA Sect 5(a)(e)(f)	23 = TSCA Sect 6
24 = TSCA Sect 12(b)	25 = TSCA Sect 8(a)
26 = TSCA Sect 8(d)	28 = Canadian WHMIS
29 = OSHA CEILING	

None of the components of this material are found on the regulatory lists indicated.

## 11. TOXICOLOGICAL INFORMATION

### EYE IRRITATION:

No product toxicology data available. The hazard evaluation was based on data from similar products.

### SKIN IRRITATION:

No product toxicology data available. The hazard evaluation was based on data from similar materials.

### DERMAL TOXICITY:

No product toxicology data available. The hazard evaluation was based on data from similar materials.

### RESPIRATORY/INHALATION:

No product toxicology data available. The hazard evaluation was based on data from similar materials.

### INGESTION:

The oral LD50 in rats is greater than 5.0 g/kg.

## 12. ADDITIONAL HEALTH DATA

### ADDITIONAL HEALTH DATA COMMENT:

This product contains potassium salts. Ingestion of large amounts (25 or more grams) of potassium salts usually causes a person to vomit. If the person is not suffering from a preexisting kidney condition the absorbed potassium is rapidly excreted in the urine. However, very young children or individuals with compromised kidney and/or cardiac function could experience the following effects after ingesting excessively large doses of potassium salts: irritation and inflammation of the stomach lining, muscular weakness, burning, tingling and numbness sensations of hands and feet, slower heart beat, reduced blood pressure, irregular heart beat and cardiac arrest.