



CRYOTECH E36[®]

MATERIAL SAFETY DATA SHEET

1. PRODUCT NAME & DESCRIPTION

CRYOTECH E36[®] Liquid Runway Deicer
Complies with Specification AMS 1435

MANUFACTURED AND SUPPLIED IN THE USA BY:

Cryotech Deicing Technology
6103 Orthoway
Fort Madison, IA 52627
United States

CRYOTECH CONTACT INFORMATION:

Telephone: (800)346-7237
FAX: (319)372-2662
email: deicers@cryotech.com
website: <http://www.cryotech.com>

2. CHEMICAL 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	COMPONENT	CAS#
100%	Cryotech E36 [®] Liquid Runway Deicer	
CONTAINING		
50%	Potassium Acetate	127-08-2
<1.0%	Corrosion Inhibitors in	
50%	Water	7732-18-5

CAS - Chemical Abstract Service Number

3. HAZARD IDENTIFICATION

(also see Sections 11 and 12)

CAUTION! - MAY CAUSE EYE IRRITATION

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.

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.

OCCUPATIONAL EXPOSURE LIMITS:

None identified

4. FIRST AID MEASURES

Chemical Emergency: Spill, leak, fire, or accident call
Chemtrec day or night (800)424-9300;
Outside continental USA call (703)527-3887

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 the 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.

5. FIRE FIGHTING MEASURES

FLASH POINT:

>100°C

AUTO IGNITION:

No data available

FLAMMABILITY LIMITS (% by volume in air):

Lower: No data available

Upper: No data available

Non-flammable

EXTINGUISHING MEDIA:

Use extinguishing media appropriate for surrounding fire.

FIRE FIGHTING PROCEDURES:

Fire fighters should wear proper protective equipment, self-contained breathing apparatus with full face piece operated in positive pressure mode.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water.

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. ACCIDENTAL RELEASE MEASURES

Chemical Emergency: Spill, leak, fire, or accident call
Chemtrec day or night (800)424-9300;
Outside continental USA call (703)527-3887

SPILL/LEAK PRECAUTIONS:

Contain spillage and absorb on suitable material e.g. sawdust, sand or earth. Transfer to a container for disposal. See section 13.
Wash the spillage area with plenty of water.

7. HANDLING AND STORAGE

STORAGE:

Store in clean vessels and containers away from direct heat and strong oxidizing agents. Do not store or handle product with systems constructed of wetted parts that have galvanized steel, zinc or brass components.

SPECIAL PRECAUTIONS:

Avoid contact with skin and eyes. Avoid breathing mist when spraying.



CRYOTECH E36[®]

MATERIAL SAFETY DATA SHEET

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Clear, colorless to light straw colored liquid. (May be dyed blue at customer request)

pH (20°C):

10.5 - 11.5

BOILING POINT:

~115°C

SPECIFIC GRAVITY (20°C):

1.28

EVAPORATION:

No data available

VAPOR PRESSURE (20°C):

17 mm Hg

PERCENT VOLATILE (VOLUME %):

No data available

VAPOR DENSITY (AIR = 1):

No data available

VISCOSITY (20°C):

6.5 cP

MELTING POINT:

-40°C

SOLUBILITY:

Completely miscible in water.

10. STABILITY & 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.

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 products.

DERMAL TOXICITY:

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

RESPIRATORY/INHALATION:

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

INGESTION:

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

12. ECOLOGICAL INFORMATION

COD (TOD): 0.32 g O₂/g deicer

BOD₅ @ 20° C: 0.25 g O₂/g deicer

13. DISPOSAL CONSIDERATION

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 an RCRA hazardous waste. If product should spill or be otherwise unsuitable for normal deicing applications, it may be absorbed on suitable materials and disposed of in sanitary landfill unless state or local regulations prohibit such disposal.

14. TRANSPORT INFORMATION

Not restricted under any transport regulations.

15. REGULATORY INFORMATION

ALL OF THE COMPONENTS IN THIS PRODUCT ARE ON THE FOLLOWING INVENTORY LISTS:

U.S.A. (TSCA)

Europe (EINECS)

Canada (DSL/NDSL)

TSCA SECTION 12(b):

None of the components in this product are regulated under TSCA Section 12(b).

OSHA HAZARD CLASSIFICATION:

Hazardous Chemical (Irritant);

None of the components in this product are considered highly hazardous by OSHA.

CERCLA HAZARDOUS SUBSTANCES:

There is no CERCLA Reportable Quantity for this material.

SARA 311 CATEGORIES:

Immediate (Acute) Health Hazard: Yes

Delayed (Chronic) Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactivity Hazard: No

SARA 313:

None of the components in this product are subject to reporting under SARA Section 313.

CLEAN WATER ACT:

None of the components in this product are listed as Priority Pollutants under the CWA.

None of the components in this product are listed as Toxic Pollutants under the CWA.

STATE RIGHT-TO-KNOW:

This product does not contain components at levels which are required to be reported under the statutes of the following states: PA, MA, NJ

This product does not contain components known to the State of California (Proposition 65) to cause cancer and/or reproductive harm at levels which would require a warning under the statute.

WHMIS (Canada) CLASSIFICATION:

Not controlled

16. OTHER INFORMATION

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.

Latest version of this MSDS can be found at <http://www.cryotech.com>

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.