



SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ice Liquid Agent
Other Identifiers: Low Temperature Foam Solution, Di (ethylene glycol) butyl ether
Product Code(s): Amerex 22210
Model Code(s) on Fire Extinguisher: ICE 1,2,4, ICE H2,H4, ICE S4, ICS 14, ICS 28
Recommended Uses: Liquid extinguishant and cooling agent
Manufacturer: AMEREX CORPORATION
Internet Address: www.amerex-fire.com
Address: 7595 Gadsden Highway, P.O. Box 81
Trussville, AL 35173-0081
Company Telephone: (205) 655-3271
E-mail Address: info@amerex-fire.com
Emergency Contacts: Chemtrec 1(800) 424-9300 or
(703) 527-3887
Revised: January 2015

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: NA	None	None
Skin Sensitization: NO	None	None
Eye: Category 2B	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s): None

GHS – Signal Word(s): Warning

Other Hazards Not Resulting in Classification: None

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H302 317 320 335	Harmful if swallowed May cause allergic skin reaction Causes eye irritation May cause respiratory irritation
Environmental	None	
Precautionary:		
General	P101 102	If medical advice is needed, have product container or label at hand Keep out of reach of children
Prevention	264 280 281 285	Wash hands and face thoroughly after handling Wear protective gloves/clothing; eye and face protection Use personal protective equipment as required In case of inadequate ventilation, wear respiratory protection
Response	P301+312 302+352 332+352 304+313+341 305+351+338 308+313 337+313	If swallowed, call doctor/Poison Control Center if victim feels unwell If on skin, wash with soap and water If skin irritation occurs, seek medical advice If inhaled, and if distress occurs, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, and continue to rinse If exposed or concerned, get medical advice/attention If eye irritation persists; get medical advice/attention
Storage	P401+402+403	Store in original container or extinguisher in a dry, well ventilated place

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Water	NA	NA	7732-18-5	>50
Potassium Acetate	204-822-2	NA	127-08-2	<45
Glycol ether	203-961-6	NA	112-34-5	<1
Phosphate Ester	NA	NA	72283-31-9	<1
Fluorosurfactant	NA	NA	proprietary	<1

Emergency overview:

Adverse health effects and symptoms:

Clear to opaque liquid solution.

As a dust, bulk liquid, or spray, this product is an irritant to the respiratory system, eyes, and skin. Symptoms may include coughing, sore throat, difficulty breathing, eye pain, and skin redness and irritation. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Water	NA	NA	NA	NA
Potassium Acetate	NA	NA	NA	NA
Glycol ether	NA	NA	NA	NA
Phosphate Ester	NA	NA	NA	NA
Fluorosurfactant	NA	NA	NA	NA

Section 4. FIRST AID MEASURES

Eye Exposure:	Causes irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention immediately.
Skin Exposure:	May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing. May cause dizziness or drowsiness. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include severe pain in the mouth and throat, collapse, breathing difficulty due to swollen throat, severe abdominal pain, diarrhea, and a rapid drop in blood pressure. If victim is conscious and alert, give 2-3 glasses of water or milk to drink. Do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined

Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Carbon and potassium oxides
<u>Explosion Data:</u>	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon and potassium. (see Section 10).
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand. NIOSH (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing.
Personal Protective Equipment:	During minor spill clean-up: Minimum – chemical goggles, nitrile gloves, and an air purifying respirator.
Emergency Procedures:	Large spills (one container or more) should be addressed by hazardous materials technicians who follow a specific emergency response plan and who are trained in the appropriate use of PPE.
Methods for Containment:	Prevent further leakage or spillage if safe to do so. Use sorbent socks for containment
Methods for Clean Up:	Avoid dust formation; clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and drum for disposal; properly label containers; dispose as a hazardous waste.
Environmental Precautions:	Prevent material from entering waterways.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).
Conditions for Safe Storage/Handling:	Keep product in tightly closed container in a cool area. Use in well ventilated area. Prevent falling. Do not allow near heat sources. Contents may be under

Incompatible Products:

Hazardous Decomposition Products:

Hazardous Polymerization:

pressure – inspect for extinguisher rust periodically to ensure container integrity. Clean used equipment prior to storage.

Do not mix with other extinguishing agents. Do not allow contact with lime. Avoid acids, or contact with aluminum, brass, bronze, copper, lead, tin, zinc, or other alkali sensitive metals or alloys.

Carbon oxides, Potassium oxides

Will not occur

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Water	NA	NA	NA	NA
Potassium Acetate	PNOR** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³	NA	NA
Glycol ether	NA	NA	100 mg/m ³	NA
Phosphate Ester	NA	NA	NA	NA
Fluorosurfactant	NA	NA	NA	NA

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Engineering Controls:

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment – PPE Code E:



Eye/Face Protection:

Skin and Body Protection:

Respiratory Protection:

Chemical goggles

Wear nitrile or similar gloves/coveralls

If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure supplied air

Hygiene Measures:

respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. The need for respiratory protection is not likely for short-term use in well ventilated areas. Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to opaque liquid
Molecular Weight:	Not Applicable
Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature °C:	<100
Freezing Point °C:	No information available
Initial Boiling Point °C:	Product decomposes
Physical State:	Crystalline powder when shipped
pH:	Approximately 8.95 at 20 C
Flash Point °C:	Not Applicable
Auto-ignition Temperature °C:	None
Boiling Point/Range °C:	Not Applicable
Melting Point/Range °C:	Not Applicable
Flammability:	Not flammable
Flammability Limits in Air °C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	<10mm Hg at 20 C
Specific gravity:	Approximately 1.2 at 20 C
Solubility:	Soluble in water
Partition Coefficient:	No Information Available
Viscosity:	Not Applicable

Section 10. STABILITY AND REACTIVITY

Stability:

Stable under recommended storage and handling conditions.

Reactivity:	Not reactive
Possibility of Hazardous Reactions:	Slight
Incompatibles:	Strong acids and oxidizers, lime, inorganic bases. Avoid contact with aluminum, brass, bronze, copper, lead, tin, zinc, or other alkali sensitive metals or alloys
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Heat of fire may release carbon monoxide, carbon dioxide, and oxides of potassium.
Possibility of Hazardous Reactions:	None
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin, and eye contact.
Symptoms:	
Immediate	
Inhalation:	Irritation, coughing.
Eyes:	Mild irritation.
Skin:	Irritation.
Delayed:	Symptoms appear to be relatively immediate
Acute Toxicity:	Relatively non-toxic.
Chronic Toxicity:	
Short-term Exposure:	None known.
Long-term Exposure:	As with all dusts, pneumoconiosis, or "dusty lung" disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Water	NA	NA	NA
Potassium Acetate	3250 mg/kg (rat)	NA	NA
Glycol ether	7200 mg/kg (rat)	13000 mg/kg (rabbit)	NA
Phosphate Ester	NA	NA	NA
Fluorosurfactant	NA	NA	NA

Reproductive Toxicity:	This product's ingredients are not known to have reproductive or teratogenic effects.
Target Organs and Effects (TOST):	Respiratory system (mild irritant). This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. Ingestion may cause gastrointestinal injury. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Water	None	None	None	None	None	None
Potassium Acetate	None	None	None	None	None	None
Glycol ether	None	None	None	None	None	None
Phosphate Ester	None	None	None	None	None	None
Fluorosurfactant	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:	A weak environmental toxin. Specific negative impacts are unknown.
Persistence/Degradability:	Soluble in water; moderate degradation in soil. Rapid photolytic degradation in air.
Probability of rapid biodegradation:	Est: 0.792 (Rapid)
Anaerobic biodegradation probability:	Est: - 0.943
Bioaccumulation potential:	Low.
Bioconcentration factor:	Est: 3.16 L/kg (wet weight)
Bioaccumulation:	Extent unknown.
Mobility in soil:	Slow evaporation rate; water soluble, may leach to groundwater

Other Adverse Ecological Effects: No other known effects at this time

Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Water	N/A	N/A
Potassium Acetate	N/A	N/A
Glycol ether	Not acutely toxic	Not acutely toxic
Phosphate Ester	N/A	N/A
Fluorosurfactant	N/A	N/A

Aquatic Toxicity Values – Environment – Calculated Estimates

Chemical Name	Acute (LC50)	EC50
Water	N/A	N/A
Potassium Acetate	25786 mg/L Fish 96 hr; 12270 mg/l Daphnid 48 hr;	4403 mg/L Gr. Algae 96 hr
Glycol ether	Not acutely toxic	Not acutely toxic
Phosphate Ester	N/A	N/A
Fluorosurfactant	N/A	N/A

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations.

NOTES:

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number:	NA
UN Proper Shipping Name:	NA
Transport Hazard Class:	NA
Packing Group:	NA
Marine Pollutant?:	NO
IATA	Not regulated
DOT	Not regulated

NOTES:

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

Special Precautions for Shipping:

If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class is Limited Quantity when pressurized to less than 241 psig and when shipped via highway or rail. Use a Non-Flammable gas label (class 2.2) when shipping via air.

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

REACH Title VII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Glycol ether	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Phosphate Ester	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Fluorosurfactant	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Glycol ether	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Phosphate Ester	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Fluorosurfactant	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification: XN Irritant
R Phrases: 20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system, and skin.

S Phrases:	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.
	38	Eye/face protection.

U.S. Federal Regulatory Information:

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act:

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None

California – Permissible Exposure Limits for Chemical Contaminants: None

Florida – Substance List: None **Illinois**

– Toxic Substance List: None **Kansas** –

Section 302/303 List: None

Massachusetts – Substance List: None

Minnesota – List of Hazardous Substances: None

Missouri – Employer Information/Toxic Substance List: None

New Jersey – Right to Know Hazardous Substance List: None

North Dakota – List of Hazardous Chemicals, Reportable Quantities: None

Pennsylvania – Hazardous Substance List: None

Rhode Island – Hazardous Substance List: None
Texas – Hazardous Substance List: None
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Other:

Mexico – Grade	No component listed
Canada – WHMIS Hazard Class	No component listed

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	23-October-2013
Revision Date	06-January-2015
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made.
Updated by William F. Garvin, CIH.