

# Kilfrost ABC-S®

## MATERIAL SAFETY DATA SHEET



### 1. PRODUCT NAME & DESCRIPTION

**Kilfrost ABC-S®**  
Aircraft De-/anti-icing fluid, Type IV  
Complies with Specification AMS 1428

**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](mailto:deicers@cryotech.com)  
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**MANUFACTURED AND SUPPLIED IN EUROPE BY**  
Kilfrost Limited  
Albion Works, HALTWHISTLE  
Northumberland, NE49 0HJ  
ENGLAND

**Kilfrost Contact Numbers (direct dial from USA)**  
Working hours: (011)(44)1434 321 500  
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### 2. CHEMICAL COMPOSITION

Aqueous monopropylene glycol mixture.  
Contains a minimum of 50% monopropylene glycol (CAS 57-55-6)  
None of the ingredients are classed as Dangerous Substances.

### 3. HAZARD IDENTIFICATION

**RESPIRATORY/INHALATION:** Considered to be non-hazardous.

**SKIN IRRITATION:** Unlikely to cause irritation.

**EYE CONTACT:** May cause temporary irritation.

**INGESTION:** Considered to be non-hazardous.

**OCCUPATIONAL EXPOSURE LIMITS:**

An exposure limit has been set for Monopropylene Glycol (synonym Propane-1,2-diol). This applies to the UK only.  
UK (EH 40) OES

Total (vapor & Particulates)		150 ppm ( 10 mg/m <sup>3</sup> )(8hr TWA)
Particulates		- ppm ( 10 mg/m <sup>3</sup> )(8hr TWA)
ACGIH	TLV - TWA	No limit assigned.
FRANCE	VME	No limit assigned.
GERMANY	MAK	No limit assigned.

### 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 least 15 minutes while holding eyelids open. Consult medical personnel if irritation persists

**SKIN CONTACT:** Wash off in flowing water. Launder contaminated clothing before re-use.

**INHALATION:** Remove to fresh air if feeling unwell. Consult medical personnel if symptoms persist.

**INGESTION:** Give large quantities of water to drink. Consult medical personnel.

### 5. FIRE FIGHTING MEASURES

**FLASH POINT (close cup):** None below boiling point.

**AUTO IGNITION:** 446°C

**EXPOSURE LIMITS:** No data.

**EXTINGUISHING MEDIA:** Water, foam, Carbon Dioxide, dry powder.

**FIRE FIGHTING PROCEDURES:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** Incomplete combustion may produce Carbon Monoxide and other harmful gases/vapors.

**UNUSUAL FIRE HAZARDS:** The product may become combustible after prolonged heating at the boiling point.

**NFPA RATINGS:**

**Health 0; Flammability 1; 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 tightly sealed original containers, away from direct heat and strong oxidizing agents.

**SPECIAL PRECAUTIONS:** Avoid contact with skin and eyes. Avoid breathing mists/vapors when spraying.

Do not use uncoated mild steel tanks. For advice on bulk and/or heated storage contact Cryotech.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**EYE PROTECTION:** Wear eye protection if splashing is possible.

**SKIN PROTECTION:** Gloves and protective overalls recommended if prolonged contact is likely.

**VENTILATION:** Maintain sufficient ventilation to comply with 'Occupational Exposure Standard'.

### 9. PHYSICAL AND CHEMICAL PROPERTIES (typical values)

**APPEARANCE:** Clear green fluid

**ODOR:** None

**pH (20°C):** 7

**BOILING POINT:** ~104°C

**FLAMMABILITY DATA:** See Section 5

**VAPOR PRESSURE (20°C):** 15 mm Hg

**SPECIFIC GRAVITY (20°C):** 1.038

**VAPOR DENSITY (AIR = 1):** 1.0 (estimated)

**FREEZING POINT:**

100%	-37°C
75% v/v	-22°C
50% v/v	-11°C

**BROOKFIELD LVT VISCOSITY (Spindle No. 1 or 2; 0.3rpm):**

20°C	27,500 mPas
-25°C	12,000 mPas

**SPECIFIC HEAT:**

20°C	3.6 J/g/°C
70°C	3.7 J/g/°C

**SOLUBILITY IN WATER:** Completely miscible.

