



HEALTH and SAFETY DATA
According to EU Directive 91/155 and Amendments

1. PRODUCT NAME Kilfrost ABC-S SUPPLIED BY Kilfrost Limited Albion Works HALTWHISTLE Northumberland NE49 0HJ ENGLAND	DESCRIPTION Aircraft de-/anti-icing fluid, Type IV. Complies with specification AMS 1428. EMERGENCY NUMBERS Telephone: Working Hours: (01434) 320332 Other Times: (01228) 573614 FAX: (01434) 321463 e-mail: info@kilfrost.co.uk
---	--

2. COMPOSITION 2.1 Aqueous monopropylene glycol mixture. 2.2 Contains a minimum of 50% monopropylene glycol.

3. HAZARD IDENTIFICATION 3.1 Inhalation 3.2 Skin 3.3 Eyes 3.4 Ingestion 3.5 Occupational Exposure Limits UK (EH 40) WEL Total (vapour & particulates) Particulates ACGIH TLV – TWA FRANCE VME GERMANY MAK	 Considered to be non-hazardous. Unlikely to cause irritation. May cause temporary irritation. Considered to be non-hazardous. An exposure limit has been set for Monopropylene Glycol (synonym Propane-1,2-diol). This applies in the UK only. 150 ppm (470 mg/m ³) (8hr TWA) - ppm (10 mg/m ³) (8hr TWA) No limit assigned. No limit assigned. No limit assigned.
---	---

HEALTH and SAFETY DATA

4. FIRST AID MEASURES

- | | | |
|-----|--------------|---|
| 4.1 | Ingestion | Give large quantities of water to drink. Consult medical personnel. |
| 4.2 | Skin contact | Wash off in flowing water. Launder contaminated clothing before re-use. |
| 4.3 | Eye contact | Irrigate with water for 5 minutes. Obtain medical assistance if irritation persists. |
| 4.4 | Inhalation | Remove to fresh air if feeling unwell. Consult medical personnel if symptoms persist. |
-

5. FIRE FIGHTING MEASURES

- | | | |
|-----|-----------------------------------|--|
| 5.1 | Flash point (closed cup) | None below boiling point. |
| 5.2 | Auto ignition temperature | 446°C |
| 5.3 | Explosion limits | No data. |
| 5.4 | Specific fire-fighting procedures | None. |
| 5.5 | Unusual fire hazards | The product may become combustible After prolonged heating at the boiling point. |
| 5.6 | Extinguishing media | Water, foam, Carbon Dioxide, dry powder. |
| 5.7 | Hazardous decomposition products | Incomplete combustion may produce Carbon Monoxide and other harmful gases/vapours. |
-

6. ACCIDENTAL RELEASE MEASURES

- | | |
|-----|---|
| 6.1 | Contain spillage and absorb on suitable material e.g. sawdust, sand or earth. Transfer to a container for disposal. See section 13. |
| 6.2 | Wash the spillage area with plenty of water. |
-

7. HANDLING AND STORAGE

- | | |
|-----|---|
| 7.1 | Avoid contact with skin and eyes. Avoid breathing mists/vapours when spraying. |
| 7.2 | Store in tightly sealed original containers, away from direct heat and strong oxidising agents. |

HEALTH and SAFETY DATA

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Maintain sufficient ventilation to comply with 'Workplace Exposure Limit'.
8.2 Wear eye protection if splashing is possible. An eye wash bottle should be available.
8.3 Gloves and protective overalls recommended if prolonged contact is likely.
-

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical Values

9.1	Appearance	Clear, green fluid (or colourless subject to customer demands).
9.2	Odour	None.
9.3	pH (20°C)	7
9.4	Boiling point	104°C
9.5	Flammability data	See 5.1 – 5.3
9.6	Vapour pressure (20°C)	15 mm Hg
9.7	Specific gravity (20°C)	1.038
9.8	Vapour density (air = 1)	1.0 (estimated)
9.9	Freezing point	
	100%	-37°C
	75% v/v	-22°C
	50% v/v	-11°C
9.10	Brookfield LVT Viscosity (Spindle No. 1 or 2; 0.3 rpm)	
	20°C	25000 mPas
	-25°C	12000 mPas
9.11	Specific heat	
	20°C	3.6 J/g°C
	70°C	3.7 J/g°C
9.12	Solubility in water	Completely miscible.

10. STABILITY AND REACTIVITY

- 10.1 Stable under normal storage conditions.
10.2 Incompatible materials – strong oxidising agents.

HEALTH and SAFETY DATA

11. TOXICOLOGICAL INFORMATION

- 11.1 Considered to have low oral toxicity. See also section 3.
- 11.2 LD₅₀ (rat – oral) > 2000 mg/Kg (OECD 401)
- 11.3 LC₅₀ (zebra fish) 1414 mg/L (OECD 203, 96h)
- 11.4 EC₅₀ (daphnia magna) 1131 mg/L (OECD 202, Part I, 48h)
- 11.5 EC₅₀ (bacteria) >10000 mg/L (DIN 38412, Part 8, 16h)
-

12. ECOLOGICAL INFORMATION

- 12.1 BOD₅ 358 mg O₂/g test substance (OECD 301D)
- 12.2 COD 835 mg O₂/g test substance (OECD 301D)
- 12.3 Biodegradability readily biodegradable (OECD 301E)
- 12.4 Water Danger Class (WGK) 1
-

13. DISPOSAL CONSIDERATION

- 13.1 Controlled incineration or landfill in accordance with local, state or national regulations.
-

14. TRANSPORT INFORMATION

- 14.1 Not restricted under any transport regulations.
-

15. REGULATORY INFORMATION

- 15.1 Not classified as hazardous under any regulations.
-

16. OTHER INFORMATION

- 16.1 All components are registered in accordance with EINECS AND TSCA.
-

The information contained herein is based on the present state of our knowledge. No responsibility is accepted that the information is sufficient or correct in all cases.

Date: 16 October 2006