



HEALTH and SAFETY DATA

<p>1. PRODUCT NAME</p> <p>KILFROST TKS 406B</p> <p>SUPPLIED IN THE USA BY</p> <p>Kilfrost Inc. 6250 Coral Ridge Drive Suite 130 Coral Springs, Florida 33076 USA</p> <p>SUPPLIED IN EUROPE BY</p> <p>Kilfrost Limited Albion Works HALTWHISTLE Northumberland NE49 0HJ ENGLAND</p>	<p>DESCRIPTION</p> <p>Fluid for the TKS in-flight ice protection system</p> <p>EMERGENCY NUMBERS</p> <p>Working Hours: 954 282 5050 Emergency: 954 558 7268 Alt emergency: 954 294 3675 Facsimile: 954 282 5049 E-mail: usa.sales@kilfrost.com</p> <p>EMERGENCY NUMBERS</p> <p>Telephone: Working Hours: (01434) 320332 Other Times: (01228) 573614 FAX: (01434) 321463 e-mail: info@kilfrost.com</p>
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2. COMPOSITION

2.1	Contains 85% mono ethylene glycol (Harmful; R22; S2, 24/25)	CAS 107-21-1
2.2	Contains 5% ethyl alcohol (Flammable; R11; S7, 16)	CAS 64-17-5

3. HAZARD IDENTIFICATION

3.1	Inhalation	Inhalation of large quantities may produce symptoms of intoxication.		
3.2	Skin	May be slightly irritant. Small amounts may be absorbed through skin.		
3.3	Eyes	May cause temporary irritation.		
3.4	Ingestion	Swallowing may lead to kidney damage. Symptoms of alcoholic intoxication may occur.		
3.5	Occupational Exposure Limits	Exposure limits have been set for the following,		
	(Synonyms	Mono Ethylene Glycol	Ethyl Alcohol	
	UK (EH 40) WEL	Ethane-1,2-diol	Ethanol)	
	Particulate	10 (8hr TWA)	-	mg/m ³
	Vapour	52 (8hr TWA);125 (STEL)	1900 (8hr TWA)	mg/m ³
	ACGIH TLV	125 (ceiling)	1900 (8hr TWA)	mg/m ³
	GERMANY MAK	26	1900	mg/m ³

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4. FIRST AID MEASURES

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| 4.1 | Ingestion | DO NOT INDUCE VOMITING. Give large amounts of water to drink. Obtain medical attention. |
| 4.2 | Skin contact | Wash off in flowing water. Launder contaminated clothing before re-use. |
| 4.3 | Eye contact | Irrigate with water for 15 minutes. Obtain medical assistance if irritation persists. |
| 4.4 | Inhalation | Remove to fresh air if feeling unwell. Consult medical personnel if symptoms persist. |
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5. FIRE FIGHTING MEASURES

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| 5.1 | Flash point (closed cup) | 54°C (129°F). |
| 5.2 | Auto ignition temperature | 365°C (690°F). |
| 5.3 | Explosion limits | No data. |
| 5.4 | Specific fire-fighting procedures | None. |
| 5.5 | Unusual fire hazards | None. |
| 5.6 | Extinguishing media | Water fog, alcohol resistant foam, Carbon Dioxide, dry powder. |
| 5.7 | Hazardous decomposition products | Incomplete combustion may produce Carbon Monoxide and other harmful gases/vapours. |
| 5.8 | NFPA RATINGS | |
| | | Health 1; Flammability 2; Reactivity 0: Special NDA
(Least – 0, Slight – 1, Moderate – 2, High – 3, Extreme – 4) |
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6. ACCIDENTAL RELEASE MEASURES

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| 6.1 | Prevent entry into drains and watercourses. Inform authorities if any does enter |
| 6.2 | Contain spillage and absorb on suitable material e.g. sawdust, sand or earth.
Transfer to a container for disposal. See section 13. |
| 6.3 | Wash the spillage area with plenty of water. |
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7. HANDLING AND STORAGE

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| 7.1 | Avoid contact with skin and eyes. |
| 7.2 | Avoid breathing mists/vapours if spraying. |
| 7.3 | Store in tightly sealed original containers, away from direct heat and strong oxidising agents. |
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Maintain sufficient ventilation to comply with occupational exposure limits.
 - 8.2 Avoid any unnecessary formation of mists and aerosols.
 - 8.3 When handling for any length of time wear goggles & chemical resistant gloves. If there is a possibility of body contact, a rubber or PVC apron should be worn.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Typical Values

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| 9.1 | Appearance | Clear, colourless fluid. |
| 9.2 | Odour | Slight alcohol. |
| 9.3 | pH (20°C) | 6.0 – 7.5 |
| 9.4 | Boiling point | 120°C |
| 9.5 | Flammability data | See 5.1 – 5.3 |
| 9.6 | Vapour pressure (20°C) | 7 mmHg (estimated). |
| 9.7 | Specific gravity (20°C) | 1.092 – 1.097 |
| 9.8 | Vapour density (air = 1) | 2 (estimated). |
| 9.9 | Freezing point | below -60°C sets to a glass. |
| 9.10 | Viscosity (20°C) | 11 – 13 mm ² /s |
| 9.11 | Solubility in water | Completely miscible. |
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10. STABILITY AND REACTIVITY

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

- 11.1 LD₅₀ (rat – oral) >8,000 mg/Kg (est.)
 - 11.2 Swallowing may lead to kidney damage. See also section 3.
 - 11.3 The oral intake of mono ethylene glycol has caused teratogenic effects in laboratory animals. The relevance of this to humans has not been established.
 - 11.4 This product does not contain any ingredients identified as carcinogenic by IARC, NTP or OSHA.
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12. ECOLOGICAL INFORMATION

- 12.1 Readily biodegradable by naturally occurring micro organisms.
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13. DISPOSAL CONSIDERATION

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

14.1	Classification for transport	Flammable.
14.2	Shipping name	Flammable liquid n.o.s.*, with flash point between 21 & 55°C. (Preparation containing Ethanol).
14.3	Hazard label	Flammable
14.4	IATA	UN No. 1993; class 3; packing group III
14.5	IMDG	UN No. 1933; class 3; packing group III EMS F-E, S-D
14.6	ADR	Class 3; packing group III
	Substance identification no.	UN 1993
	Hazard identification no.	30

15. REGULATORY INFORMATION

15.1	EU classification for supply	Harmful, Flammable
15.2	Hazard symbol	St Andrew's Cross.
15.3	Risk phrase	R10: Flammable (Flash point 54°C) R22: Harmful if swallowed
15.4	Safety phrases	S2: Keep out of reach of children. S24/25: Avoid contact with skin & eyes.* <i>*Additional recommended safety advice.</i>
15.5	SARA 313	Ethylene glycol listed
15.6	State RTK regulations	Ethylene Glycol, Ethyl Alcohol

16. OTHER INFORMATION

- 16.1 All components are registered in accordance with EINECS and TSCA.
- 16.2 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.
- 16.3 Latest version of this MSDS can be found at <http://www.kilfrost.com>
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**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.**

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Kilfrost Limited. Registered in England No. 297731.
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