



ics service

NATIONWIDE SUPPORT

HEALTH and SAFETY DATA

1. PRODUCT NAME

FlowCool+
FOOD SAFE REFRIGERANT

SUPPLIED BY

ICS Cool Energy Ltd
ICS House
Stephenson Road
Calmore Industrial Estate, Totton, SO30 3RY

DESCRIPTION

HEAT TRANSFER FLUID.

EMERGENCY NUMBERS

Telephone: 0800 169 3861
Fax: (02380) 428366
E-mail: info@icstemp.com

2. HAZARD IDENTIFICATION

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|-----|------------|---------------------------------|
| 2.1 | Inhalation | Considered to be non-hazardous. |
| 2.2 | Skin | Unlikely to cause irritation. |
| 2.3 | Eyes | May cause temporary irritation. |
| 2.4 | Ingestion | Considered to be non-hazardous. |

3. COMPOSITION

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|-----|---|-------------------------------|
| 3.1 | Aqueous monopropylene glycol mixture, not classed as hazardous. | |
| 3.2 | Monopropylene glycol | CAS 57-55-6; EINECS 200-338-0 |

4. FIRST AID MEASURES

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| 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

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|-----|--------------------------|--------|
| 5.1 | Flash point (closed cup) | 118 °C |
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| 5.2 | Auto ignition temperature | 446°C |
| 5.3 | Explosion limits | No data. |
| 5.4 | Specific fire-fighting procedures | None. |

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|-----|----------------------------------|--|
| 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. |
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6. ACCIDENTAL RELEASE MEASURES

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| 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. |
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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 when 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

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| 8.1 | Workplace Exposure Limit [UK: EH40 WEL] | Monopropylene Glycol (synonym Propane-1,2-diol). |
| | Total (vapour & particulates) | 150 ppm (470 mg/m ³) (8hr TWA) |
| | Particulates | - ppm (10 mg/m ³) (8hr TWA) |
| 8.2 | Maintain sufficient ventilation to comply with 'Workplace Exposure Limit'. | |
| 8.3 | Wear eye protection if splashing is possible. An eye wash bottle should be available. | |
| 8.4 | Gloves and protective overalls recommended if prolonged contact is likely. | |
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9. PHYSICAL AND CHEMICAL PROPERTIES **Typical Values**

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|-----|------------|--------------------|
| 9.1 | Appearance | Clear, blue fluid. |
| 9.2 | Odour | None. |

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9.3	pH (20°C)	10
9.4	Boiling point	132°C
9.5	Flammability data	See 5.1 – 5.3
9.7	Specific gravity (20°C)	1.052
9.9	Freezing point	below -60°C
9.10	Viscosity (20°C)	38 mPas
9.11	Specific heat (20°C)	2.9 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.
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11. TOXICOLOGICAL INFORMATION

- 11.1 Considered to have low oral toxicity. See also section 3.
 - 11.2 LD₅₀ (rat – oral) > 30,000 mg/Kg (est)
 - 11.3 LC₅₀ (Pimephales Promelas) > 5,000 mg/L (96h)
 - 11.4 LC₅₀ (Daphnia Magnia) 10,000 mg/L(48h)
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12. ECOLOGICAL INFORMATION

- 12.1 Fully biodegradable - >99% in 5 days.
 - 12.2 Not expected to bioaccumulate.
 - 12.3 Not considered a hazard to aquatic 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 Not restricted under any transport regulations.
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15. REGULATORY INFORMATION

- 15.1 Not classified as hazardous under any regulations.
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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: 18 April 2011