

SAFETY DATA SHEET

HEATSAVR



mipa099

1. Identification of the substance/preparation and of the company/undertaking

Product name	:	HEATSAVR	Supplier	:	Flexible Solutions International 615 Discovery St. Victoria, B.C. V8N 1X5 Canada
Chemical product name	:	ISOPROPANOL			
Synonyms	:	ISOPROPYL ALCOHOL; PROPAN-2-OL; 2-PROPANOL; DIMETHYL CARBINOL; IPA;			
EMERGENCY ONLY TELEPHONE NUMBER	:	24 Hour CANUTEC Emergency: (613) 996 6666 Regarding IPA exposure	Telephone No.	:	(250) 477 - 9969
			Fax No.	:	(250) 477 - 9912
Formula	:	CH ₃ CHOHCH ₃	Molecular Mass	:	60.09

2. Composition/information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	%	EC Number	Symbol	R-Phrases
1) Isopropanol	67-63-0	90-95	200-661-7	F, Xi	R11, R36, R37, R67
2) Organic Surfactant		5			

* Occupational Exposure Limit(s), if available, are listed in Section 8

Composition	CONTAINS ISOPROPANOL
CAS No.	67-63-0
EINECS Number	200-661-7

3. Hazards identification

Physical/chemical Hazard:	Highly flammable.
Human health hazards :	Irritating to eyes. Vapours may cause drowsiness and dizziness.

4. First-aid measures

First-Aid measures

Inhalation	:	Remove from exposure, rest and keep warm. Seek medical attention if irritation persists.
Ingestion	:	Do not induce vomiting. Seek medical attention immediately and show this safety data sheet.
Skin contact	:	Wash affected skin with soap and water. If irritation persists, seek medical attention.
Eye Contact	:	In case of eye contact, rinse with water until irritation subsides. If irritation persists, seek medical attention.

5. Fire-fighting measures

Extinguishing Media	Powder, foam or CO ₂
Hazardous Decomposition Products	Oxides of carbon, noxious fumes

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6. Accidental release measures

Spill Cleanup Methods : Eliminate all sources of ignition and ventilate area. Use an absorbent material, e.g. Sand, to mop up residue. See section 13 Disposal Considerations.

7. Handling and storage

Handling : Adequate ventilation should be provided if there is risk of vapour build-up. Avoid contact with eyes, skin and clothing.

Storage : Store in original container below 40°C. Keep container tightly closed. Storage area should be under cover away from direct sunlight and well ventilated. Store away from sources of heat or ignition.

Packaging materials

Recommended use : Use original container.

8. Exposure controls/personal protection

Ventilation : No specific ventilation requirements but mechanical ventilation may be required if air contamination exceeds an acceptable level.

Hygiene Measures : Wash hands after handling compounds and before eating, smoking, using lavatory, and the end of the day.

<u>Ingredient Name</u>	<u>OES: Occupational Exposure Standard</u>
1) Isopropanol/Ethanol	EH40 (United Kingdom (UK)). OES: 500 ppm Period: 15 minute(s).

Personal protective equipment

Respiratory system : Respiratory protection if there is a risk of exposure to high vapour concentrations.

Skin and body : Wear: antistatic footwear rubber apron.

Hands : PVC or rubber gloves.

Eyes : Chemical goggles.

9. Physical and chemical properties

Physical state : Liquid.

Colour : Light Blue/Green.

Odour : Alcoholic.

Boiling point : 80.5°C (177°F)

Melting point : -120.5°C (-184.9°F)

Density : 0.785 g/cm³ at 20°C (68°F)

Vapour density : 1.84 (Air = 1)

Vapour pressure : 5 kPa (34 mmHg) (at 20°C)

Solubility : Easily soluble in cold water and heated water.

Octanol/water partition coefficient : The product is equally soluble in oil and water; log(oil/water) = 0.1

pH : Not available.

Flash point : 10 - 12

Fire Hazards in Presence of Various Substances : Highly flammable in presence of open flames, sparks and static discharge, of heat.

Autoignition temperature : >400°C (752°F)

Lower explosion limit : LOWER: 2% UPPER: Less or equal to 13%

Viscosity : Kinetic: 3.127 cS

10. Stability and reactivity

Stability : The product is stable under normal conditions.

Conditions to Avoid : High temperatures. Exposure to direct sunlight. Static discharge.

Materials to avoid : Strong oxidising agents. Strong acids.

Hazardous decomposition products : Heating may produce: flammable gases. Combustion will generate: oxides of carbon.

11. Toxicological information

<u>Local effects</u>	:	
Skin irritation	:	May cause defatting of the skin, but is not classified as an irritant.
Eye irritation	:	Irritating to eyes
Inhalation	:	Prolonged exposure to vapors may cause temporary drowsiness.
Ingestion	:	Low toxicity - ingestion of large quantities may lead to intoxication.
Acute toxicity	:	Acute oral toxicity (LD50): 4700 to 5500 mg/kg [Rat]. Acute dermal toxicity (LD50): >12800 mg/kg [Rabbit]. Acute toxicity of the vapour (LC50): 47 to 73 mg/l 4 hours [Rat].

12. Ecological information

Persistence/degradability	:	Biodegradability: Readily biodegradable.
Bioaccumulative potential	:	This product shows a low bioaccumulation potential.
Ecotoxicity	:	Ecotoxicity in water: (LC50): 9600 mg/l, 96 hours [Fish (Fathead minnow.)]. (EC50): 4600 mg/l, 48 hours [Daphnia].

13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging	:	Dispose of in accordance with all applicable local and national regulations.
Waste Classification	:	Not applicable.

14. Transport information

International transport regulations

UN	:	UN number	1219
UN	:	Proper shipping name	Alcohols (Isopropanol)
UN	:	Class	3
UN	:	Packing group	II
UN	:	Label	



ADR/RID	:	Number	1219
ADR/RID	:	Proper shipping name	Alcohols (Isopropanol)
ADR/RID	:	Class	3
ADR/RID	:	Item Number	3(b)
ADR/RID	:	Hazard identification number	33
TREMCARD	:	TEC(R)	TEC(R)-544


IMDG	:	Proper shipping name	Alcohols (Isopropanol, Ethanol)
IMDG	:	Packing group	II
IMDG	:	Class	3

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IMDG	:	Marine pollutant	Not pollutant.
IMDG	:	Ems Number	3-06
IMDG	:	MFAG Number	305
IATA	:	Proper shipping name	Alcohols (Isopropanol)
IATA	:	Packing group	II
IATA	:	Class	3

15. Regulatory information

EU Regulations

Hazard symbol(s)	:	
Classification	:	Highly flammable, Irritant
Risk Phrases	:	R11- Highly flammable. R36- Irritating to eyes. R67- Vapours may cause drowsiness and dizziness.
Safety Phrases	:	S2- Keep out of the reach of children. S7- Keep container tightly closed. S16- Keep away from sources of ignition - No smoking. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Product Use	:	Classification and labelling have been performed according to EU directives 67/548/EEC, 88/379/EEC, including amendments and the intended use. - Consumer applications, Industrial applications.

Other EU regulations

Tactile warning of danger	:	Yes, applicable.
Restriction to Market Directive	:	Not applicable.

16. Other information

History	:	<i>(please note that dates are in Canadian format [day/month/year])</i>
Date of printing	:	01/11/2008
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Prepared by	:	Flexible Solutions Ltd.

Notice to Readers

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

CHANGES SINCE PREVIOUS VERSIONS:

Version 2: Data placed in new MSDS format.

Version 2