

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

## HEATSAVR / ECOSAVR

Version 2.2

Print Date 2012/11/05

Revision date / valid from 2012/11/05

MSDS code: MAAE484

### Section 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name : HEATSAVR / ECOSAVR

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Water treatment for swimming pools and spas. Evaporation inhibitor.

Uses advised against : At this moment we have not identified any uses advised against

#### 1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK & Ireland  
Albion House, Rawdon Park  
GB LS19 7XX Leeds Yeadon

Telephone : +44 (0) 113 3879 200  
Telefax : +44 (0) 113 3879 280  
E-mail address : msds@brenntag.co.uk

#### 1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):  
+44 (0) 1865 407333 (N.C.E.C. Culham)

### Section 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Flammable liquids	Category 2	---	H225
Eye irritation	Category 2	---	H319
Specific target organ toxicity - single exposure	Category 3	---	H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

## HEATSAVR / ECOSAVR

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Highly flammable (F)Highly flammable (F)	R11
Irritant (Xi)Irritant (Xi)	R36
	R67



For the full text of the R-phrases mentioned in this Section, see Section 16.

### Most important adverse effects

- Human Health : See section 11 for toxicological information.
- Physical and chemical hazards : See section 9 for physicochemical information.
- Potential environmental effects : See section 12 for environmental information.

## 2.2. Label elements

### Labelling according to Regulation (EC) No 1272/2008

- Hazard symbols :  
- Signal word : Danger
- Hazard statements : H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.
- Precautionary statements
- Prevention : P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response : P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove victim to fresh air

## HEATSAVR / ECOSAVR

		and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
Storage	: P403 + P235	Store in a well-ventilated place. Keep cool.

### Hazardous components which must be listed on the label:

- propan-2-ol

### 2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

## Section 3: Composition/information on ingredients

### 3.2. Mixtures

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
<b>propan-2-ol</b>				
Index-No. : 603-117-00-0	>= 90 - < 95	Flam. Liq.2	H225	F; R11
CAS-No. : 67-63-0		Eye Irrit.2	H319	Xi; R36
EC-No. : 200-661-7		STOT SE3	H336	R67
C&L-No. : 02-2119752543-38-0000				

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## Section 4: First aid measures

### 4.1. Description of first aid measures

General advice	: Remove from exposure, lie down. Take off all contaminated clothing immediately.
If inhaled	: Remove to fresh air. If unconscious place in recovery position. Consult a physician.
In case of skin contact	: Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.

## HEATSAVR / ECOSAVR

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

If swallowed : Do NOT induce vomiting. Call a physician immediately. If conscious, drink plenty of water.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : See Section 11 for more detailed information on health effects and symptoms.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

## Section 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Dry powder, Foam, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media : High volume water jet

### 5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)

### 5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Further information : Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise - with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Keep away unprotected persons. Provide adequate ventilation. Keep away from heat and sources of ignition.

### 6.2. Environmental precautions

Environmental : Do not flush into surface water or sanitary sewer system.

## HEATSAVR / ECOSAVR

precautions : Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Further information : Treat recovered material as described in the section "Disposal considerations".

### 6.4. Reference to other sections

See Section 1 for emergency contact information.  
See Section 8 for information on personal protective equipment.  
See Section 13 for waste treatment information.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

Advice on safe handling : Keep container tightly closed. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

### 7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in an area equipped with solvent resistant flooring. Keep only in the original container.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Use only in an area containing explosion proof equipment.

Further information on storage conditions : Keep tightly closed in a dry and cool place. Keep away from direct sunlight. Keep away from heat. Keep in a well-ventilated place.

Advice on common storage : Incompatible with oxidizing agents. Keep away from food, drink and animal feedingstuffs.

Storage temperature : < 40 °C

### 7.3. Specific end use(s)

## HEATSAVR / ECOSAVR

Specific use(s) : No information available.

### Section 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Component:</b>	<b>propan-2-ol</b>	<b>CAS-No.</b>
		<b>67-63-0</b>

#### Other Occupational Exposure Limit Values

EH40 WEL, Time Weighted Average (TWA):  
400 ppm, 999 mg/m<sup>3</sup>

EH40 WEL, Short Term Exposure Limit (STEL):  
500 ppm, 1,250 mg/m<sup>3</sup>

ELV (IE), Short Term Exposure Limit (STEL):  
400 ppm

ELV (IE), Time Weighted Average (TWA):  
200 ppm

#### 8.2. Exposure controls

##### Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

##### Personal protective equipment

###### *Respiratory protection*

Advice : In case of insufficient ventilation, wear suitable respiratory equipment.  
Combination filter: A-P2

###### *Hand protection*

Advice : Protective gloves complying with EN 374.  
The glove material has to be impermeable and resistant to the product / the substance / the preparation.  
As the product is a mixture of several substances, the durability of the glove materials cannot be calculated in advance and has to be tested before use.  
Protective gloves should be replaced at first signs of wear.

###### *Eye protection*

Advice : Tightly fitting safety goggles

###### *Skin and body protection*

## HEATSAVR / ECOSAVR

Advice : Solvent resistant protective clothing

### Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.  
If the product contaminates rivers and lakes or drains inform respective authorities.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Form	: Liquid
Colour	: light blue to light green
Odour	: alcohol-like
Odour Threshold	: no data available
pH	: no data available
Melting point/range	: -120.5 °C
Boiling point/boiling range	: 80.5 °C
Flash point	: 10 - 12 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: Highly flammable.
Upper explosion limit	: 13 %(V)
Lower explosion limit	: 2 %(V)
Vapour pressure	: 5 hPa (20 °C)
Relative vapor density	: 1.84
Density	: 0.785 g/cm <sup>3</sup> (20 °C)
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: > 400 °C
Thermal decomposition	: no data available

## HEATSAVR / ECOSAVR

Viscosity, kinematic	:	3.124 mm <sup>2</sup> /s
Explosivity	:	Formation of explosive air/vapour mixtures is possible.
Oxidizing properties	:	no data available

### 9.2. Other information

No further information available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

Advice : Stable under recommended storage conditions.

### 10.2. Chemical stability

Advice : No decomposition if stored and applied as directed.

### 10.3. Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.

### 10.4. Conditions to avoid

Conditions to avoid : Heat, flames and sparks. Keep away from direct sunlight.

### 10.5. Incompatible materials

Materials to avoid : Strong oxidizing agents, Strong acids

### 10.6. Hazardous decomposition products

Hazardous decomposition products : Under fire conditions: Carbon oxides

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

##### Oral

no data available

##### Inhalation

no data available



**HEATSAVR / ECOSAVR****Dermal**

no data available

**Irritation****Skin**

no data available

**Eyes**

Result : (Irritating to eyes. )

**Sensitisation**

no data available

**CMR effects****CMR Properties**

Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive toxicity : no data available

**Specific Target Organ Toxicity****Single exposure**

no data available

**Repeated exposure**

no data available

**Other toxic properties****Repeated dose toxicity**

no data available

**Aspiration hazard**

no data available

**Further information**

## HEATSAVR / ECOSAVR

Experience with human exposure : Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

<b>Component:</b>	<b>propan-2-ol</b>	<b>CAS-No.</b>
		<b>67-63-0</b>

### Acute toxicity

#### Oral

LD50 : 5280 mg/kg (rat)

#### Inhalation

LC50 : 72.6 mg/l (rat; 4 h)

LC50 : 47.5 mg/l (rat, female; 8 h)

#### Dermal

LD50 : 12800 mg/kg (rabbit)

## Section 12: Ecological information

### 12.1. Toxicity

<b>Component:</b>	<b>propan-2-ol</b>	<b>CAS-No.</b>
		<b>67-63-0</b>

### Acute toxicity

#### Fish

LC50 : 9640 mg/l (Pimephales promelas; 96 h)

#### Toxicity to daphnia and other aquatic invertebrates

EC50 : 13299 mg/l (Daphnia magna; 48 h)

### 12.2. Persistence and degradability

#### Persistence and degradability

#### Biodegradability

Result : Readily biodegradable.

### 12.3. Bioaccumulative potential

## HEATSAVR / ECOSAVR

### 12.4. Mobility in soil

### 12.5. Results of PBT and vPvB assessment

### 12.6. Other adverse effects

#### Additional ecological information

Result : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

Product : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of in accordance with local regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

## Section 14: Transport information

### 14.1. UN number

1219

### 14.2. UN proper shipping name

ADR : ISOPROPANOL  
RID : ISOPROPANOL  
IMDG : ISOPROPANOL

### 14.3. Transport hazard class(es)

ADR-Class : 3  
(Labels; Classification Code; Hazard identification No; Tunnel restriction code) 3; F1; 33; (D/E)

RID-Class : 3  
(Labels; Classification Code; Hazard identification No) 3; F1; 33

IMDG-Class : 3  
(Labels; EmS) 3; F-E, S-D

### 14.4. Packaging group

ADR : II  
RID : II

## HEATSAVR / ECOSAVR

IMDG : II

### 14.5. Environmental hazards

Labeling according to 5.2.1.8 ADR : no  
 Labeling according to 5.2.1.8 RID : no  
 Labeling according to 5.2.1.6.3 IMDG : no  
 Classification as environmentally hazardous according to 2.9.3 IMDG : no

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations : Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

### 15.2. Chemical Safety Assessment

no data available

## Section 16: Other information

### Full text of R-phrases referred to under sections 2 and 3.

R11 Highly flammable.  
 R36 Irritating to eyes.  
 R67 Vapours may cause drowsiness and dizziness.

### Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.

### Further information

Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality

## HEATSAVR / ECOSAVR

specification and does not constitute a legal relationship.  
The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.