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	<b>Revision Nr: 0</b>
	<b>Date: 25/06/2010</b>
<b>Solcide P 102</b>	<b>Supersedes: 0/0/00</b>

## **1. Identification of the Substance/Preparation and of the Company Undertaking**

Product Name: Solcide P102

Product Code

### Use/Description of Product

This product is a biocide according to Directive 98/8/EC and is recommended for use in the application fields listed in section 16.

### Company Name

Solstar Europe Limited  
14 Egerton  
High Legh, Knutsford  
Cheshire, WA16 6PT

Office No : + 44 (0) 1925 753879

Mobile No : + 44 (0) 7809370170

### Competent Person responsible for Safety Data Sheet

Richard Hirst, E-Mail: [rjh@solstareurope.com](mailto:rjh@solstareurope.com)

## **2. Hazard Identification**

### Hazard Designation:



Xi – Irritant

### Information pertaining to particular dangers for man and environment

R37 Irritating to skin

R41 Risk of serious damage to eyes.

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Classification system

The health and environment hazards of this preparation have been assessed by the conventional method described in annex II and III of the Dangerous Preparations Directive 1999/45 EC.









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### 3. Compositional Information on Ingredients

#### Chemical Characterisation

##### Description:

Preservative based on the following substances.

Dangerous Components		
CAS: 52-51-7 EINECS:200-143-0 Index number: 603-085-00-8	Bronopol  <b>Xn</b> ,  <b>Xi</b> ,  <b>N</b> ; R 21/22-37/38-41-50	10 - 25%
CAS: 55965-84-9 Index number: 613-167-00-5	Mixture of: 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)  <b>T</b> ,  <b>C</b> ,  <b>N</b> ; R 23/24/25-34-43-50/53	Ca. 0.5%

#### Additional Information:

For the wording of the listed risk phrases refer to section 16.

### 4. First Aid Measures

#### General Information

Personal Protection for the first aider.

#### After Inhalation

Supply fresh air, consult doctor in case of symptoms.

#### After Skin Contact

Take off contaminated clothing immediately

Wash immediately with plenty of water and soap and rinse thoroughly.

If skin irritation occurs, get medical attention.

In case of extensive skin contact immediately use safety shower.

#### After Eye Contact

Rinse opened eye for at least 15 minutes under running water and apply a sterile protective bandage. Get medical attention.

#### After Swallowing

Rinse mouth and drink plenty of water.

Do not induce vomiting. Call for medical help.

Do not give anything by mouth to an unconscious person.

#### Information for the Doctor

The following symptoms may occur

Allergic skin reaction.



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#### Treatment

Rinse eyes thoroughly with physiological saline.

## **5. Fire Fighting Measures**

#### Suitable extinguishing agents:

Water spray jet, extinguishing powder, CO<sub>2</sub>, foam.

#### Unsuitable extinguishing agents for reasons of safety:

None

#### Special hazards caused by the material, its products of combustion or flue gasses:

In case of fire, toxic incineration products may be released such as:

Nitrogen Oxides (NO<sub>x</sub>)

Carbon Monoxide (CO)

Bromine compounds such as HBr, Br<sub>2</sub>

Hydrogen chloride (HCl)

#### Protective equipment

Wear self contained breathing apparatus.

#### Additional Information:

Collect contaminated fire fighting water separately. It must not enter drains.

## **6. Accidental Release Measures**

#### Personal safety precautions:

Wear protective clothing (See item 8).

Keep unprotected persons away.

When selecting the protective suit attention has to be paid to the complete and safe protection of skin and mucous membranes. Impermeable protective clothes, protective boots made of neoprene, complete face protection and nitrile-rubber-gloves with long tops should be worn.

#### Measures for environmental protection

As the product is hazardous for aquatic environment, it must be prevented from reaching surface water.

Prevent from spreading (e.g. by dusting a ring of chemical binder).

Inform authorities in case of contamination of water sewage system.

#### Measures for cleaning/collecting:

Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically.

Suitable binder: Multipurpose absorbent.

Dispose of contaminated material as waste according to item 13.



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## **7. Handling and Storage**

### Information for safe handling:

Ensure good exhaust ventilation at the workplace.

It is preferable to handle the product in a closed system.

Decant carefully, avoid splashes.

Compliance with the minimum requirements designed to guarantee a better standard of safety and health at work is essential to ensure the safety of workers.

### Information about protection against explosion and fire:

No special measures required.

### Storage

#### Requirements to be met by storerooms and containers:

Use polyolefin containers.

Prevent any penetration into the ground.

Information about suitable materials for vessels and piping can be requested from Richard Hirst,

E-Mail: RJH@Solstareurope.com

### Information about storage in a common storage facility:

None.

### Further information about storage conditions:

Possibility of reversible formation of crystals at temperatures  $< 0^{\circ}\text{C}$ . After warming up and stirring the product can be used again.

Prevent release to the environment by adequate secondary containment design and use of appropriate spill control procedures.

### Specific applications

Biocide is used for the protection of aqueous based manufactured products by the control of contamination caused by fungi and bacteria. The biocide can be added to the product during its manufacturing process. For a better dispersion it is recommended to add as early as possible and to mix well. In order to assure effective impact the necessary dosage of the biocide is defined by analyzing the effectiveness of the manufactured product.

## **8. Exposure controls and personal protection:**

### Additional information about design of technical systems:

No further data see item 7.



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Components with critical values that require monitoring at the workplace:

<b>57-55-6 1,2 propylene glycol</b>	
WEL (Great Britain)	Long-term value: 474* 10** mg/m <sup>3</sup> , 150* ppm *total vapour and particulates **particulates
<b>55965-84-9 Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)</b>	
WEL (Great Britain)	Long-term value: 0.2 mg/m <sup>3</sup> Recommended

Additional information:

Information valid at the time of review of the safety data sheet.

Personal protective equipment

General protective and hygienic measures:

Use skin cream for skin protection.

Avoid contact with the eyes and the skin.

Wash hands during work breaks and at the end of the shift.

Provide skin protection plan.

Respiratory protection:

Respiratory protection is recommended in example substance concentrations exceeding the air limiting value.

Filter A/P2.

Protection of hands:



Chemical protective gloves according to DIN EN 374 with CE-labeling.

Check the condition of protective gloves after each use for any damages like holes, cuts or tears.

Do not wear protective gloves longer than necessary.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves:

Nitrile rubber, NBR

Penetration time of glove material:

Penetration time depends on different criteria and may be determined by the manufacturer according to the norm DIN EN 374-3.



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Gloves made of the following materials are not suitable:  
Leather Gloves.

#### Eye Protection



Safety goggles

Body protection:  
Protective clothing

## **9 Physical and chemical properties:**

### General Information

Form: Liquid  
Colour: Colourless/ Clear  
Odour: Mild

### Change in condition

Melting Point / Melting range: Not determined  
Boiling Point / Boiling range: ca. 100°C

Flash point: Not applicable

Self Inflammability: Product is not self igniting.

Danger of explosion: Product is not explosive.

Density at 20°C: 1.05 – 1.15 g/cm<sup>3</sup>

Solubility in / Miscibility  
With Water:

Fully miscible

pH-value at 20°C: 3.7 – 4.3  
The pH may drift downwards during storage. This has no effect on the quality of the product.

## **10 Stability and reactivity**

### Conditions to be avoided:

Before handling, the product should not be diluted or mixed with other chemicals, in order to avoid any negative influences on the active ingredient(s).

Minimum shelf life: 2 months from production date.



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Materials to be avoided:

Alkalis  
Strong oxidizing agents  
Reducing agents  
Nucleophils

Dangerous reactions:

Corrosive action on metals possible.

Dangerous products of decomposition:

None, if storage and handling is done according to specification.

## **11 Toxicological information**

Acute toxicity:

LD/LC50 values that are relevant for classification

### **52-51-7 Bronopol**

Oral	LD50	254 mg/Kg (rat)
Dermal	LD50	1600 mg/Kg (rat)
<b>55965-84-9 Mixture, containing 5-Chloro-2-methyl-2H-isthiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)</b>		
Oral	LD50	67 mg/Kg (rat)
Dermal	LD50	>140 mg/Kg (rat)
Inhalative	LC50/ 4h	0.17 mg/l (rat)

Primary irritant effect:

On the skin: Irritant for skin and mucous membranes.

On the eye: Strong irritant effect, with the danger of severe eye injury.

Sensitization:

Sensitization possible by skin contact.

## **12 Ecological information:**

Information about elimination (persistence and degradability):

Other information:

The active ingredient(s) is (are) biodegradable up to the MIC for bacteria.

Behaviour in environmental systems:

Components:

The active substance CIT/MIT proved to be biodegradable in the simulation test OECD 301 D (Closed-Bottle-Test), )2-consumption:>60%.

Mobility and bioaccumulation potential:

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

Log Pow 0.18 Bronopol

Log Pow -0.71 - +0.75: CIT/MIT



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Ecotoxicological effects:

<u>Aquatic toxicity:</u>	
<b>52-51-7 Bronopol</b>	
EC50 / 48 hrs	1.4 mg/l (Daphnia)
IC50 72 hrs	0.4 mg/l (Algae)
LC50 / 96 hrs	41.2 mg/l (rainbow trout)
<b>55965-84-9 Mixture containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)</b>	
EC50 / 48 hrs	0.12 mg/l (Daphnia)
LC50 / 96 hrs	0.22 mg/l (rainbow trout)
	0.025 mg/l (Selenastrum capicornutum)

<u>Behaviour in sewage processing plants</u>	
<b>52-51-7 Bronopol</b>	
EC50	>50 mg/l (Bacteria)
<b>55965-84-9 Mixture containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)</b>	
EC50	7.9 mg/l (Activated sludge)

Remark: Depending on concentration, toxic effects on activated sludge organisms are possible.

Additional ecological information:

COD-value: 515mg )2/g product

AOX-indication:

Can affect the AOX-value of the effluent water.

AOX (DIN 38409 H 14): 1.18%

The formulation contains the following heavy metals and their compounds according to Directive 2006/11/EC:

None.

General Notes:

The product contains materials that are harmful to the environment.

Avoid transfer to the environment.





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### **13 Disposal considerations:**

Product:

Recommendation

Product must be disposed of according to local regulations pertaining to the disposal of hazardous waste.

European Waste catalogue	
16 00 00	Wastes not otherwise specified in the list
16 03 00	Off-specification batches and unused products
16 03 05	Organic wastes containing dangerous substances

Contaminated packaging:

Recommendation:

Remove all product from packaging and clean thoroughly before recycling.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

### **14 Transport information:**

Land transport ADR/RID (cross-border / domestic):



ADR / RID Class:

8 (C3) Corrosive substances.

Kemler Number:

80

UN-Number:

3265

Packaging group:

III

Label

8

Designation of goods:

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Mixture containing 5-Chloro-2-methyl-2H-isothiazol-3-one and  
2-Methyl-2H-isothiazol-3-one (3:1))



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Maritime transport IMDG:



IMDG Class: 8  
UN Number: 3265  
Label 8  
Packing group II  
EMS Number: F-A,S-B  
Correct technical name: 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Mixture containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1))

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 8  
UN/ID Number: 3265  
Label: 8  
Packing Group: II  
Correct technical name: 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Mixture containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1))

Remarks: Packing Instruction / Max. net weight  
Passenger aircraft: 818 / 5L  
Cargo aircraft: 820 /60L

**15 Regulatory information**

Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous materials (CHIP)

Code letter and hazard designation of product:



Xi Irritant



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Hazard-determining components o labeling:

Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)  
Bronopol

Risk Phrases

38 Irritating to skin  
41 Risk of serious damage to eyes.  
43 May cause sensitisation by skin contact  
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety Phrases:

24 Avoid contact with skin.  
26 In case of contact with eyes rinse immediately with plenty o water and seek medical advice.  
36/39 Wear gloves and eye/face protection.  
60 This material and its container must be disposed of as hazardous waste.  
61 Avoid release to the environment. Refer to special instructions/safety data sheet.

Identity of biocidal active substance according to EC directive 98/8/EC:
Bronopol
Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)

National regulations

Information about limitation of use:

Take note of Directive 94/33/EC on the protection of young people at work  
Take note of Directive 92/85/EC on the safety and health of pregnant women at work.

Regulations which may apply in event of accident: Control of Major Accident Hazards (COMAH)  
Not listed in the COMAH regulation.

Water hazard class:

Water danger class 2(Self assessment): hazardous for water.

Indication of VOC according to Directive 1999/13 EG regarding the limitation of emissions of volatile organic compounds (VOC-Directive):

VOC: 25% (maximum)

**16 Other information:**

This data is based on our current knowledge. However it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.



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R-phrases relevant to the product's hazardous ingredients:

21/22	Harmful in contact with skin and if swallowed
23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
34	Causes burns
37/38	Irritating to respiratory system and skin
41	Risk of serious damage to eyes.
43	May cause sensitisation by skin contact.
50	Very toxic to aquatic organisms.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Training hints

Further information regarding the directions for use can be found in the Product Data Sheet. Should you require any information regarding classification and registration of preparations containing this product please contact Richard Hirst, E-Mail: [RJH@Solstareurope.com](mailto:RJH@Solstareurope.com)

Recommended application fields and dose levels for biocides:

In-can preservatives (PT 6): 0.5-2.5 g/Kg

Fibre, leather, rubber and polymerised materials preervatives (PT9): 0.5-2.5 g/Kg.

Preservatives for liquid-cooling and processing systems (PT 11): 0.5-2.5 g/Kg

Slimicides (PT 12): 0.5-2.5 g/Kg