



<b>Material Safety Data Sheet</b>	<b>Page: 1/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

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

Product Name: Solcide P107

Product Code

### Use/Description of Product

Biocide for industrial and/or commercial use.

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:



Xn – Harmful

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

R20/22 Harmful by inhalation and if swallowed.  
R38 Irritating to skin.  
R41 Risk of serious damage to eyes.  
R43 May cause sensitization by skin contact.

### 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.



<b>Material Safety Data Sheet</b>	<b>Page: 2/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

### **3. Compositional Information on Ingredients**

#### Chemical Characterisation

##### Description:

Micro biocide based on 2,2-Di-Bromo-3-Nitrilo-Propionamide (DBNPA)

Dangerous Components		
CAS: 10222-01-2 EINECS:233-539-7	2,2-Di-Bromo-3-Nitrilo-Propionamide  <b>T</b> ,  <b>Xi</b> ,  <b>N</b> ; R 23/25-38-41-43-50	20%

#### 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

Remove contaminated clothing immediately

Destroy or thoroughly clean contaminated shoes.

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 a Doctor immediately.

#### Information for the Doctor

The following symptoms may occur

Allergic skin reaction

#### Treatment

If swallowed, gastric irrigation with activated Carbon.

Rinse eyes thoroughly with physiological saline.



<b>Material Safety Data Sheet</b>	<b>Page: 3/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

## **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>

### 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

Prevent from spreading (e.g. by enclosing with a ring of chemical absorbent).

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

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.

Clean the accident area carefully.

Suitable cleaners are: weak alkaline solution



<b>Material Safety Data Sheet</b>	<b>Page: 4/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

## **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 and health of workers.

### Information about protection against explosion and fire

No special measures required.

### Storage

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

Store only in unopened original containers.

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

Store away from foodstuffs.

#### Further information about storage conditions

The product, as supplied, naturally and very slowly evolves Carbon Dioxide gas. Therefore, to relieve any excess pressure, the product is supplied in specially vented containers which are recommended for the continued storage of the product. In order to prevent spillages, always ensure that these containers are stored and transported in upright position.

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

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

### Additional information about design of technical systems

No further data see item 7.

### Components with critical values that require monitoring at the workplace

None established.

### 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.



<b>Material Safety Data Sheet</b>	<b>Page: 5/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

#### 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 damage 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.

#### Gloves made of the following materials are not suitable

Gloves for mechanical protection do not provide protection against chemicals.

#### Eye Protection



Safety Goggles

#### Body protection Protective clothing

#### Risk management measures

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

## **9. Physical and chemical properties**

#### General Information

Form:

Liquid

Colour:

Pale yellow / Clear

Odour:

Type specific



<b>Material Safety Data Sheet</b>	<b>Page: 6/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

Change in condition

Melting Point / Melting range Not determined  
Boiling Point / Boiling range 100°C

Flash point Not applicable

Self Inflammability Product is Self igniting.

Danger of explosion Product is not explosive.

Vapour pressure at 20°C 23 hPa

Density at 20°C 1.235-1.285 g/cm<sup>3</sup>

Solubility in / Miscibility  
With Water Fully miscible

pH-value at 20°C 2.0 – 5.0

## **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).

Protect against temperatures > 35°C

Minimum shelf life: 6 months from production date.

Materials to be avoided

Alkalis  
Oxidizing agents  
Reducing agents  
Nucleophils

Dangerous reactions: Corrodes aluminum.

Dangerous products of decomposition

Possibly traces of:  
Cyanogen bromide  
Dibromoacetonitrile

## **11. Toxicological information**

Acute toxicity

LD/LC50 values that are relevant for classification		
Oral	LD50	510 mg/Kg (rat)
Dermal	LD50	>2000 mg/Kg (rat)



<b>Material Safety Data Sheet</b>	<b>Page: 7/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

Primary irritant effect

On the skin: Irritant or skin and mucous membranes.

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

Sensitization: Sensitization possible by skin contact.

Sub acute to chronic toxicity

Non mutagenic (Ames-test OECD 471: In vitro genmutation study in bacteria).

Non teratogenic (OECD 414 / EPA 83-3 a)

## **12. Ecological information:**

Information about elimination (persistence and degradability)

Method OECD 301 B (Modified Sturm Test)

Degree o elimination

Biodegradability

The components are readily biodegradable.

Degree of biological degradability: 78%

Behaviour in environmental systems

Mobility and bioaccumulation potential

Low potential to bio accumulate

Log Kow 0.79: DBNPA

Bio concentration factor (BCF):13: DBNPA

Ecotoxicological effects

<u>Aquatic toxicity:</u>	
<u>EC50 / 48 hrs</u>	<u>3.3 mg/l (Daphnia)</u>
<u>IC50 72 hrs</u>	<u>1.5 mg/l (Selenastrum capricornutum)</u>
<u>LC50 / 96 hrs</u>	<u>3.5 mg/l (rainbow trout)</u>

<u>Behaviour in sewage processing plants</u>	
<u>EC50</u>	<u>15 mg/l (Activated Sludge)</u>

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

Additional ecological information

COD-value 990mg O2/g product

AOX-indication

Can affect the AOX-value o the effluent water.

AOX (DIN 38409 H 14): 0.8%



<b>Material Safety Data Sheet</b>	<b>Page: 8/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

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.

### **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	Of-specification batches and unused products
16 03 05	Organic wastes containing dangerous substances

#### Contaminated packaging

Recommendation: remove all products 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. (2,2-Di-Bromo-3-Nitrilo-Propionamide)





<b>Material Safety Data Sheet</b>	<b>Page: 9/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

#### Maritime transport IMDG



IMDG Class: 8  
UN Number: 3265  
Label: 8  
Packing group: III  
EMS Number: F-A,S-B  
Correct technical name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,2-Di-Bromo-3-Nitrilo-Propionamide)

#### Air transport ICAO-TI and IATA-DGR



ICAO/IATA Class: 8  
UN/ID Number: 3265  
Label: 8  
Packing Group: III  
Correct technical name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,2-Di-Bromo-3-Nitrilo-Propionamide)  
Remarks: It is forbidden to air freight the package if it is ventilated ( IATA-DGR 5.0.2.13.2). For samples upto 1 litre ventilated packages are not required.

## **15. Regulatory information**

### Designation according to EC guidelines

The product has been classified and labelled in accordance with EC Directives ? UK CHIP Regulations

### Code letter and hazard designation of product



Xn Harmful

### Hazard-determining components o labeling

2,2-Di-Bromo-3-Nitrilo-Propionamide



<b>Material Safety Data Sheet</b>	<b>Page: 10/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

#### Risk Phrases

- 20/22 Harmful by inhalation and if swallowed.  
38 Irritating to skin  
41 Risk of serious damage to eyes  
43 May cause sensitisation by skin contact.

#### Safety Phrases

- 24 Avoid contact with skin.  
26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.  
36/37/39 Wear suitable protective clothing, 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:
2,2-Di-Bromo-3-Nitrilo-Propionamide

#### 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.

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

Due to the formulation, no volatile organic solvents, which may contribute to the VOC-value, are contained.

#### Indication of VOC

Directive 1999/13/EG: VOC-value: 0% (calculated)

Directive 2004/42/EG: Max. VOC-content: 252 g/L.

## **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.

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

- 23/25 Toxic by inhalation and if swallowed.  
38 Irritating to skin  
41 Risk of serious damage to eyes.  
43 May cause sensitisation by skin contact.  
50 Very toxic to aquatic organisms.



<b>Material Safety Data Sheet</b>	<b>Page: 11/11</b>
	<b>Revision Nr: 0</b>
	<b>Date: 10/04/2010</b>
<b>Solcide P 107</b>	<b>Supersedes: 0/0/00</b>

Recommended application fields and dose levels for biocides

In-can preservatives (PT 6): 0.5-5.0 g/Kg

Preservatives for liquid-cooling and processing systems (PT 11): 0.5-5.0 g/Kg

Slimicides (PT 12): 0.5-5.0 g/Kg