



## SAFETY DATA SHEET GARLIC WATER SOLUBLE

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

#### 1.1. Product identifier

Product name GARLIC WATER SOLUBLE

Product number 64516

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

Identified uses Food / Feed additive Food industry

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

Supplier Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
BD3 7AY  
+44 1274 267300  
+44 1274 267306  
SDS.EMEA@univarsolutions.com

#### 1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 64516

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Sens. 1 - H317

Environmental hazards Not Classified

#### 2.2. Label elements

##### Hazard pictograms



Signal word Warning

Hazard statements H317 May cause an allergic skin reaction.

Precautionary statements P261 Avoid breathing vapour/ spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P501 Dispose of contents/ container in accordance with national regulations.

Contains DIALLYL DISULPHIDE

## GARLIC WATER SOLUBLE

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

|                                                                                                                                           |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>DIALLYL DISULPHIDE</b>                                                                                                                 | <b>1-5%</b>          |
| CAS number: 2179-57-9                                                                                                                     | EC number: 218-548-6 |
| <b>Classification</b><br>Flam. Liq. 3 - H226<br>Acute Tox. 3 - H301<br>Skin Irrit. 2 - H315<br>Eye Irrit. 2 - H319<br>Skin Sens. 1 - H317 |                      |

The full text for all hazard statements is displayed in Section 16.

**Composition comments**      The data shown are in accordance with the latest EC Directives.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                     |                                                                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues. |
| <b>Ingestion</b>    | Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.                                                                                                  |
| <b>Skin contact</b> | Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.                                                  |
| <b>Eye contact</b>  | Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.                                     |

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

|                     |                                      |
|---------------------|--------------------------------------|
| <b>Skin contact</b> | May cause an allergic skin reaction. |
| <b>Eye contact</b>  | May cause temporary eye irritation.  |

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

**Notes for the doctor**      Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

|                                       |                                                                                  |
|---------------------------------------|----------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>   | Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. |
| <b>Unsuitable extinguishing media</b> | Do not use water jet as an extinguisher, as this will spread the fire.           |

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

|                                      |                                                                                                                    |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Hazardous combustion products</b> | Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|

## GARLIC WATER SOLUBLE

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Use protective equipment appropriate for surrounding materials.

## SECTION 6: Accidental release measures

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

**Personal precautions** Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

### 6.2. Environmental precautions

**Environmental precautions** Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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

**Methods for cleaning up** Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Flush contaminated area with plenty of water.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures above 8°C.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

## GARLIC WATER SOLUBLE

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hand protection</b>                | The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. |
| <b>Other skin and body protection</b> | Wear suitable protective clothing as protection against splashing or contamination.                                                                                                                                                                                                                                                                                                                                 |
| <b>Hygiene measures</b>               | Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.                                                                                                                                                                                                                                                                                          |
| <b>Respiratory protection</b>         | No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.                                                                                                                                                                                                                                                                                                     |

### SECTION 9: Physical and chemical properties

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

|                                                     |                           |
|-----------------------------------------------------|---------------------------|
| <b>Appearance</b>                                   | Oily liquid.              |
| <b>Colour</b>                                       | Light brown.              |
| <b>Odour threshold</b>                              | No information available. |
| <b>pH</b>                                           | No information available. |
| <b>Melting point</b>                                | No information available. |
| <b>Pour Point</b>                                   | No information available. |
| <b>Freezing Point</b>                               | No information available. |
| <b>Initial boiling point and range</b>              | No information available. |
| <b>Flash point</b>                                  | 94°C                      |
| <b>Evaporation rate</b>                             | No information available. |
| <b>Evaporation factor</b>                           | No information available. |
| <b>Flammability (solid, gas)</b>                    | No information available. |
| <b>Upper/lower flammability or explosive limits</b> | No information available. |
| <b>Other flammability</b>                           | No information available. |
| <b>Vapour pressure</b>                              | No information available. |
| <b>Vapour density</b>                               | No information available. |
| <b>Relative density</b>                             | No information available. |
| <b>Bulk density</b>                                 | No information available. |
| <b>Solubility(ies)</b>                              | No information available. |
| <b>Partition coefficient</b>                        | No information available. |
| <b>Auto-ignition temperature</b>                    | No information available. |
| <b>Decomposition Temperature</b>                    | No information available. |
| <b>Viscosity</b>                                    | No information available. |
| <b>Explosive properties</b>                         | No information available. |

## GARLIC WATER SOLUBLE

**Explosive under the influence of a flame** No information available.

**Oxidising properties** No information available.

### 9.2. Other information

**Other information** Not determined.

**Refractive index** No information available.

**Particle size** No information available.

**Molecular weight** No information available.

**Volatility** No information available.

**Saturation concentration** No information available.

**Critical temperature** No information available.

**Volatile organic compound** No information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Not determined.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 10.5. Incompatible materials

**Materials to avoid** Not determined.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**ATE oral (mg/kg)** 5,306.12

#### Skin corrosion/irritation

**Skin corrosion/irritation** No information available.

#### Serious eye damage/irritation

**Serious eye damage/irritation** No information available.

#### Respiratory sensitisation

**Respiratory sensitisation** No information available.

#### Skin sensitisation

## GARLIC WATER SOLUBLE

|                                                                  |                                                                                                    |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Skin sensitisation</b>                                        | May cause an allergic skin reaction.                                                               |
| <b><u>Germ cell mutagenicity</u></b>                             |                                                                                                    |
| <b>Genotoxicity - in vitro</b>                                   | No information available.                                                                          |
| <b><u>Carcinogenicity</u></b>                                    |                                                                                                    |
| <b>Carcinogenicity</b>                                           | No information available.                                                                          |
| <b><u>Reproductive toxicity</u></b>                              |                                                                                                    |
| <b>Reproductive toxicity - fertility</b>                         | No information available.                                                                          |
| <b><u>Specific target organ toxicity - single exposure</u></b>   |                                                                                                    |
| <b>STOT - single exposure</b>                                    | No information available.                                                                          |
| <b><u>Specific target organ toxicity - repeated exposure</u></b> |                                                                                                    |
| <b>STOT - repeated exposure</b>                                  | No information available.                                                                          |
| <b><u>Aspiration hazard</u></b>                                  |                                                                                                    |
| <b>Aspiration hazard</b>                                         | No information available.                                                                          |
| <b><u>Inhalation</u></b>                                         |                                                                                                    |
| <b>Inhalation</b>                                                | May cause respiratory irritation.                                                                  |
| <b><u>Ingestion</u></b>                                          |                                                                                                    |
| <b>Ingestion</b>                                                 | Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract. |
| <b><u>Skin contact</u></b>                                       |                                                                                                    |
| <b>Skin contact</b>                                              | May cause an allergic skin reaction.                                                               |
| <b><u>Eye contact</u></b>                                        |                                                                                                    |
| <b>Eye contact</b>                                               | May cause temporary eye irritation.                                                                |

### Toxicological information on ingredients.

#### DIALLYL DISULPHIDE

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 260.0  
mg/kg)

Species Rat

ATE oral (mg/kg) 260.0

##### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> 3,600.0  
mg/kg)

Species Rat

ATE dermal (mg/kg) 3,600.0

### SECTION 12: Ecological information

|                    |                                                                                                                                                                                                                |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity</b> | The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 12.1. Toxicity

|                 |                               |
|-----------------|-------------------------------|
| <b>Toxicity</b> | Not considered toxic to fish. |
|-----------------|-------------------------------|

#### 12.2. Persistence and degradability

## GARLIC WATER SOLUBLE

**Persistence and degradability** There are no data on the degradability of this product.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** No information available.

### 12.4. Mobility in soil

**Mobility** Not determined.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Do not puncture or incinerate, even when empty. Waste should be treated as controlled waste.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

No transport warning sign required.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user

Not applicable.

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## SECTION 15: Regulatory information

## GARLIC WATER SOLUBLE

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

#### **EU legislation**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

### **15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

## **SECTION 16: Other information**

## GARLIC WATER SOLUBLE

### Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 IATA: International Air Transport Association.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 DMEL: Derived Minimal Effect Level.  
 EL50: Exposure Limit 50  
 hPa: Hectopascal  
 LL50: Lethal Loading fifty  
 OECD: Organisation for Economic Co-operation and Development  
 POW: Octanol-water partition coefficient  
 SCBA: self-contained breathing apparatus  
 STP: Sewage Treatment Plant  
 VOC: Volatile Organic Compounds

### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Aquatic Acute = Hazardous to the aquatic environment (acute)  
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

### Key literature references and sources for data

Supplier's information.

### Classification procedures according to Regulation (EC) 1272/2008

Skin Sens. 1 - H317: Calculation method.

### Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

### Revision date

17/12/2021

**GARLIC WATER SOLUBLE**

|                                  |                                                                                                                                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Version number</b>            | 1.000                                                                                                                                                                             |
| <b>SDS number</b>                | 64516                                                                                                                                                                             |
| <b>SDS status</b>                | Approved.                                                                                                                                                                         |
| <b>Hazard statements in full</b> | H226 Flammable liquid and vapour.<br>H301 Toxic if swallowed.<br>H315 Causes skin irritation.<br>H317 May cause an allergic skin reaction.<br>H319 Causes serious eye irritation. |
| <b>Signature</b>                 | Jitendra Panchal                                                                                                                                                                  |

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