Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

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

### 1.1 Product identifier

· Trade name: KNOCK-OUT ALGAECIDE

- · Registration number Mixture
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- **Product category** PC37 Water treatment chemicals
- · Application of the substance / the mixture Algaecide
- · Uses advised against

Processes involving extreme heat use advised against. Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

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

### · Supplier:

Total Water Products Unit 6 Seaway Parade Ind. Estate Baglan Port Talbot SA12 7BR

Tel: 0044 1639 823233 e-mail: info@totalwaterproducts.co.uk

#### · Further information obtainable from: Product safety department.

· 1.4 Emergency telephone number:

Members of the public seeking specific information on poisons should contact: In England and Wales: NHS 111 - dial 111 In Scotland: NHS 24 - dial 111

### \* **SECTION 2: Hazards identification**

### · 2.1 Classification of the substance or mixture

· Classification according to GB-CLP

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

### · 2.2 Label elements

· Labelling according to GB-CLP The product is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

(Contd. of page 1)

# Trade name: KNOCK-OUT ALGAECIDE

· Hazard pictograms



· Signal word Danger

### · Hazard-determining components of labelling:

Alkyl(C12-16)dimethylbenzylammonium chloride

· Hazard statements

H314 Causes severe skin burns and eye damage.

H411 Toxic to aquatic life with long lasting effects.

### · Precautionary statements

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.

### • Additional information:

Contains biocidal active substance(s): Alkyl(C12-16)dimethylbenzylammonium chloride

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

## \* SECTION 3: Composition/information on ingredients

### · 3.2 Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

### · Dangerous components:

Dungerous components.		
CAS: 68424-85-1	Alkyl(C12-16)dimethylbenzylammonium chloride	10 - < 25%
EINECS: 270-325-2	📀 Skin Corr. 1B, H314; 🚯 Aquatic Chronic 1, H410; 🚺 Acute	
Reg.nr.: 01-2119965180-41-XXXX	Tox. 4, H302	
$\mathbf{A} = \mathbf{A} + $		

• Additional information: For the wording of the listed hazard phrases refer to section 16.

# \* **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.

#### • After inhalation:

- In case of inhalation:
- Provide fresh air.
- In case of breathing difficulties administer oxygen.
- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.
- Do not leave patient unattended.
- In case of unconsciousness place patient stably in side position for transportation.

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

# Trade name: KNOCK-OUT ALGAECIDE

(Contd. of page 2) · After skin contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor. • After eye contact: Check for and remove any contact lenses. Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. · Information for doctor: Probable mucosal damage may contraindicate gastric lavage. 4.2 Most important symptoms and effects, both acute and delayed Corrosive damage to gastro-intestinal tract. · Hazards Danger of gastric perforation. 4.3 Indication of any immediate medical attention and special treatment needed If swallowed or in case of vomiting, danger of entering the lungs. If swallowed, gastric irrigation with added, activated carbon. **SECTION 5: Firefighting measures** · 5.1 Extinguishing media • Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray. Use fire extinguishing methods suitable to surrounding conditions.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture

Corrosive liquid.

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

Nitrogen oxides (NOx)

5.3 Advice for firefighters

• **Protective equipment:** Wear self-contained respiratory protective device. Do not inhale explosion gases or combustion gases. Wear fully protective suit.

• Additional information Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system.

# \* SECTION 6: Accidental release measures

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

Particular danger of slipping on leaked/spilled product. Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

- 6.2 Environmental precautions:
- Do not allow product to reach sewage system or any water course in the undiluted form. Do not allow to penetrate the ground/soil.

Inform respective authorities in case of seepage into water course or sewage system.

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

(Contd. of page 3)

# Trade name: KNOCK-OUT ALGAECIDE

#### · 6.3 Methods and material for containment and cleaning up:

Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Contaminated absorbent material may pose the same hazard as the spilt product.

Ensure adequate ventilation.

# • 6.4 Reference to other sections See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## \* SECTION 7: Handling and storage

### · 7.1 Precautions for safe handling

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Safety showers and eye wash facilities should be available at the work area.

· Information about fire - and explosion protection: No special measures required.

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

- · Storage:
- Requirements to be met by storerooms and receptacles: Prevent any seepage into the ground.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Store away from oxidising agents.
- · Further information about storage conditions:
- Protect from frost.
- Store in cool, dry conditions in well sealed receptacles.
- Storage class: 8 B
- 7.3 Specific end use(s) No further relevant information available.

# \* SECTION 8: Exposure controls/personal protection

### · 8.1 Control parameters

• Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the

workplace.	
DNEC	

· PNECs		
CAS: 68424-85-1 Alkyl(C12-16)dimethylbenzylammonium chloride		
Freshwater	420 ng/L	
Freshwater - Intermittent releases	160 ng/L	
Marine water	96 ng/L	
Marine Water - Intermittent releases	207 ng/L	
Sewage Treatment Plant	160 µg/L	
Sediment (freshwater)	68 mg/kg	
Sediment (marine water)	15.75 mg/kg	
Soil	1.66 mg/kg	
	(Contd. on page 5)	

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

(Contd. of page 4)

# Trade name: KNOCK-OUT ALGAECIDE

• Additional information: The lists valid during the making were used as basis.

### · 8.2 Exposure controls

When selecting PPE attention has to be paid to the complete and safe protection of skin, eyes and mucous membranes. • Appropriate engineering controls No further data; see section 7.

- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:
- The usual precautionary measures are to be adhered to when handling chemicals.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Do not eat, drink, smoke or sniff while working.

Depending on the degree of exposure, periodic medical examination is suggested.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Ensure that eyewash stations and safety showers are close to the workstation location.

- Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.
- Hand protection



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Face shield/visor.

Use equipment tested and approved under appropriate government stangards such as EN166 (EU) or NIOSH (US)



Tightly sealed goggles conforming to EN166.

Use visor in combination with goggles. • **Body protection:** 



Impervious protective clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

# Page 6/12

# Safety data sheet according to UK REACH (SI 2020/1577) as amended

Printing date 20.02.2025

Version number 4

(Contd. of page 5)

Revision: 20.02.2025

Trade name: KNOCK-OUT ALGAECIDE

• Environmental exposure controls Do not allow to enter drains, sewers or watercourses.

• Risk management measures The operators shall be instructed adequately.

# \* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical proper	rties
General Information	
· Physical state	Liquid
· Colour:	Colourless
Odour:	Mild
Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	100 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
Decomposition temperature:	Not determined.
· pH at 20 °C	6-9
Viscosity:	
Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
Solubility	
• water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	23 hPa
• Density and/or relative density	25 m u
• Density at 20 °C:	0.994 g/cm <sup>3</sup>
• Relative density	Not determined.
· Vapour density	Not determined.
9.2 Other information	NOTE: The physical data presented above are typica
	values and should not be construed as a specification.
Appearance:	1
Form:	Fluid
Important information on protection of health and	
environment, and on safety.	
Ignition temperature:	Product is not self-igniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	1 1
· VOC (EC)	0.00 %
Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
·Explosives	Void
· Flammable gases	Void
· Aerosols	Void
	Void
· Oxidising gases	
· Oxidising gases · Gases under pressure	Void

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

### Trade name: KNOCK-OUT ALGAECIDE

		(Contd. of page 6)
· Flammable liquids	Void	
· Flammable solids	Void	
<ul> <li>Self-reactive substances and mixtures</li> </ul>	Void	
· Pyrophoric liquids	Void	
· Pyrophoric solids	Void	
<ul> <li>Self-heating substances and mixtures</li> </ul>	Void	
· Substances and mixtures, which emit flammal	ble gases	
in contact with water	Void	
· Oxidising liquids	Void	
· Oxidising solids	Void	
· Organic peroxides	Void	
· Corrosive to metals	Void	
· Desensitised explosives	Void	

### **SECTION 10: Stability and reactivity**

• 10.1 Reactivity No further relevant information available.

- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used and stored according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidising agents. Anionic compounds.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide Hydrogen chloride (HCl) Nitrogen oxides (NOx)

## \* **SECTION 11: Toxicological information**

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

• Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classifica	tion:
--	-------

ATE (Acute Toxicity Estimates)	

Oral LD50 3,975 mg/kg (rat)

# CAS: 68424-85-1 Alkyl(C12-16)dimethylbenzylammonium chloride

Oral LD50 795 mg/kg (rat)

Dermal LD50 3,400 mg/kg (rabbit)

Primary irritant effect:

· Skin corrosion/irritation Causes severe skin burns and eye damage.

• Serious eye damage/irritation Causes serious eye damage.

- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.

Page 8/12

# Safety data sheet according to UK REACH (SI 2020/1577) as amended

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

### Trade name: KNOCK-OUT ALGAECIDE

(Contd. of page 7)

- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- · Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

Inhalation may cause lung oedema, but only after initial corrosive effects on eyes and/or airways have become manifest. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

· 11.2 Information on other hazards

### · Endocrine disrupting properties

None of the ingredients are listed.

### \* SECTION 12: Ecological information

### · 12.1 Toxicity

· Aquatic toxicity:		
CAS: 68424-85-1 Alkyl(C12-16)dimethylbenzylammonium chloride		
EC50 (96 h) (static)	0.85 mg/l (Fish)	
EC50 (48 h)	EC50 (48 h) 0.016 mg/l (Bacteria)	
EC50 (72 h)	0.02 mg/l (Selenastrum capricornutum)	

• 12.2 Persistence and degradability Readily biodegradable

- 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects
- · Remark: Very toxic for fish
- Additional ecological information:
- · General notes:
- Very toxic for aquatic organisms

Also poisonous for fish and plankton in water bodies.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

### \* SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

#### · Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

### Trade name: KNOCK-OUT ALGAECIDE

(Contd. of page 8)

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

### · Uncleaned packaging:

Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Container remains hazardous when empty. Continue to observe all precautions.

Disposal must be made according to official regulations.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

### \* **SECTION 14: Transport information**

<ul> <li>14.1 UN number or ID number</li> <li>ADR/RID/ADN, IMDG, IATA</li> </ul>	UN1760
<ul> <li>14.2 UN proper shipping name</li> <li>ADR/RID/ADN</li> <li>IMDG</li> <li>IATA</li> </ul>	UN1760 CORROSIVE LIQUID, N.O.S. (Alkyl(C12-16) dimethylbenzylammonium chloride), ENVIRONMENTALLY HAZARDOUS CORROSIVE LIQUID, N.O.S. (Alkyl(C12-16) dimethylbenzylammonium chloride), MARINE POLLUTANT CORROSIVE LIQUID, N.O.S. (Alkyl(C12-16) dimethylbenzylammonium chloride)
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN	
Class	8 (C9) Corrosive substances.
· Label	8
· IMDG	
· Class	8 Corrosive substances.
· Label	8
	(Contd. on page 10)

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

# Trade name: KNOCK-OUT ALGAECIDE

	(Contd. of pag
IATA	
Class Label	8 Corrosive substances. 8
14.4 Packing group ADR/RID/ADN, IMDG, IATA	П
14.5 Environmental hazards:	Product contains environmentally hazardous substances Alkyl(C12-16)dimethylbenzylammonium chloride
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR/RID/ADN):	Symbol (fish and tree)
14.6 Special precautions for user Hazard identification number (Kemler code):	Warning: Corrosive substances. 80
Hazchem Code:	2X
EMS Number: Stowage Category	F-A,S-B B
Stowage Code	SW2 Clear of living quarters.
14.7 Maritime transport in bulk according to IM instruments	10 Not applicable.
Transport/Additional information:	
ADR/RID/ADN Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category Tunnel restriction code	2 E
IMDG	11
Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E2
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1760 CORROSIVE LIQUID, N.O.S. (ALKYL(C12-1 DIMETHYLBENZYLAMMONIUM CHLORIDE), 8, ENVIRONMENTALLY HAZARDOUS

(Contd. on page 11)

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

(Contd. of page 10)

### Trade name: KNOCK-OUT ALGAECIDE

### \* **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act
- · Regulated explosives precursors
- None of the ingredients are listed.

#### · Regulated poisons

- None of the ingredients are listed.
- · Reportable explosives precursors
- None of the ingredients are listed.

#### · Reportable poisons

None of the ingredients are listed.

- · Control Of Major Accident Hazards Regulations 2015 (COMAH)
- Named dangerous substances ANNEX I None of the ingredients are listed.
- · COMAH category E1
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### \* **SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- · Relevant phrases
- H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H410 Very toxic to aquatic life with long lasting effects.

### · Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

#### · Department issuing SDS: Product safety department.

#### • Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PNEC: Predicted No-Effect Concentration (UK REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- ATE: Acute toxicity estimate values
- Acute Tox. 4: Acute toxicity Category 4
- Skin Corr. 1B: Skin corrosion/irritation Category 1B

Printing date 20.02.2025

Version number 4

Revision: 20.02.2025

Trade name: KNOCK-OUT ALGAECIDE

Eye Dam. 1: Serious eye damage/eye irritation – Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2 · \* **Data compared to the previous version altered.** 

(Contd. of page 11)

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