SAFETY DATA SHEET

acc. to Regulation (EC) No. 1907/2006 (REACH)

mavro

WE MAKE
CHEMISTRY
WORK

ALGEN REMOVER

Version number: GHS 4.0
Replaces version of: 2023-01-27 (GHS 3)

Revision: 2023-06-28

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

1.1 Product identifier

Trade name: **Algen Remover**

Alternative number(s): 57606

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

Relevant identified uses: Biocide
Detergent

1.3 Details of the supplier of the safety data sheet

Mavro International BV
Heksekamp 1
5301 LX Zaltbommel
Netherlands

Telephone: **+31 418 680 680**
e-mail: **info@mavro-int.com**
Website: **https://www.mavro-int.com**

1.4 Emergency telephone number

Emergency information service: +31 418 680 680
This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

Poison centre

Country	Name	Postal code/ city	Telephone	Telefax	Opening hours
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital		0344 892 0111		Mon - Fri 12:00 AM - 12:00 AM

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	1	Skin Corr. 1	H314
4.1C	hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

- Signal word: danger

- Pictograms

GHS05, GHS09

- Hazard statements

H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

- Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Supplemental hazard information

	Contains 100g/L Didecyldimethylammonium chloride.
EUH210	Safety data sheet available on request.

- Hazardous ingredients for labelling: didecyldimethylammonium chloride

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
didecyldimethylammonium chloride	CAS No 7173-51-5 EC No 230-525-2 Index No 612-131-00-6	10 – < 25	Skin Corr. 1 / H314 Aquatic Chronic 1 / H410	

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
isopropanol	CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0	1 – < 5	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336	

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
didecyldimethylammonium chloride	-	-	329 $^{mg}/_{kg}$ >1,000 $^{mg}/_{kg}$	oral dermal

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of effects

Protect against external exposure, such as

frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
GB	propan-2-ol	67-63-0	WEL	400	999	500	1,250				EH40/2005

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
isopropanol	67-63-0	DNEL	500 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
isopropanol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
didecyldimethylammonium chloride	7173-51-5	PNEC	1.1 µg/l	aquatic organisms	freshwater	short-term (single instance)
didecyldimethylammonium chloride	7173-51-5	PNEC	0.11 µg/l	aquatic organisms	marine water	short-term (single instance)
didecyldimethylammonium chloride	7173-51-5	PNEC	0.14 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
didecyldimethylammonium chloride	7173-51-5	PNEC	61.86 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
didecyldimethylammonium chloride	7173-51-5	PNEC	6.186 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
didecyldimethylammonium chloride	7173-51-5	PNEC	1.4 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)
isopropanol	67-63-0	PNEC	140.9 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
isopropanol	67-63-0	PNEC	140.9 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
isopropanol	67-63-0	PNEC	2,251 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
isopropanol	67-63-0	PNEC	552 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
isopropanol	67-63-0	PNEC	552 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
isopropanol	67-63-0	PNEC	28 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- Type of material

Nitrile

- Material thickness >0,12mm

- Breakthrough times of the glove material

>480 minutes (permeation: level 6)

- Other protection measures

Wash hands thoroughly after handling.

Body protection

Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	100 °C
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	8
Kinematic viscosity	20.41 $^{mm^2}/_{s}$

Solubility(ies)

Water solubility	miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available

Vapour pressure	not determined

Density and/or relative density

Density	0.98 $^{g}/_{cm^3}$
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics

Miscibility	Completely miscible with water.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
didecyldimethylammonium chloride	7173-51-5	oral	329 $^{mg}/_{kg}$
didecyldimethylammonium chloride	7173-51-5	dermal	>1,000 $^{mg}/_{kg}$

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
didecyldimethylammonium chloride	7173-51-5	EC50	0.031 $^{mg}/_{l}$	aquatic invertebrates	21 d

12.2 Persistence and degradability

Biodegradation

The relevant substances of the mixture are readily biodegradable.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
didecyldimethylammonium chloride	7173-51-5	carbon dioxide generation	71 %	28 d		ECHA
didecyldimethylammonium chloride	7173-51-5	oxygen depletion	69 %	28 d		ECHA
isopropanol	67-63-0	oxygen depletion	53 %	5 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
didecyldimethylammonium chloride	7173-51-5		2.59 (pH value: ~7, 20 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID	UN 1903
IMDG-Code	UN 1903
ICAO-TI	UN 1903

14.2 UN proper shipping name

ADR/RID	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
IMDG-Code	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
ICAO-TI	Disinfectant, liquid, corrosive, n.o.s.
Technical name (hazardous ingredients)	isopropanol

14.3 Transport hazard class(es)

ADR/RID	8

IMDG-Code	8
ICAO-TI	8

14.4 Packing group

ADR/RID	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards hazardous to the aquatic environment

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information

Classification code	C9
Danger label(s)	8, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2X

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information

Classification code	C9
Danger label(s)	8, fish and tree

Environmental hazards	yes (hazardous to water)
Special provisions (SP)	274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3

Hazard identification No	80

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	yes (hazardous to the aquatic environment)
Danger label(s)	8, fish and tree

Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	8

Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	CAS No	Listed in	Remarks
Algen Remover		a)	
didecyldimethylammonium chloride		a)	

Legend
A) Indicative list of the main pollutants

Regulation on detergents

Labelling of contents	
Constituents	**Weight % content (or range)**
disinfectants	

Regulation concerning the export and import of hazardous chemicals (PIC)

Chemicals subject to the international prior informed consent (PIC) procedure (the 'PIC procedure').

Name of substance	CAS No	Category / subcategory	Use limitation
didecyldimethylammonium chloride	7173-51-5	p(1)	b

Legend

b	Use limitation: ban (for the sub-category or sub-categories concerned) according to Union legislation
p(1)	Sub-category: p(1) - pesticide in the group of plant protection products

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National inventories

Country	Inventory	Status
EU	REACH Reg.	all ingredients are listed

Legend

REACH Reg.	REACH registered substances

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level

Abbr.	Descriptions of used abbreviations
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.