

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 05.02.2015

Version number 2

Revision: 05.02.2015

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

- **Date of compilation:** 28.02.2005
- **1.1 Product identifier**
- **Trade name:** Melpool QAC-S
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** no data available
- **Application of the substance / the preparation:** Algicide
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
Melspring International B.V.
Arnhemsestraatweg 8
NL-6881 NG Velp
Phone: +31 (0) 26 - 38420 - 00
Fax: +31 (0) 26 - 38420 - 11
- **E-mail address of the competent person responsible for the Safety Data Sheet:** sdb@csb-online.de
- **Informing department:** Sales / Technics
- **1.4 Emergency telephone number:** As above or next toxicological information centre.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.

R10: Flammable.

- **Information concerning particular hazards for human and environment:** void

- **Classification system:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms



· Signal word Danger

· Hazard-determining components of labelling:

Didecyldimethylammonium chloride

· Hazard statements

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe mist/vapours/spray.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P315 Get immediate medical advice/attention.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.











· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 7173-51-5 EINECS: 230-525-2 Index number: 612-131-00-6	Didecyldimethylammonium chloride  C R34;  Xn R22;  N R50  Acute Tox. 3, H301;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410	10-<25%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr.: 01-2119457558-25-XXXX	Propan-2-ol  Xi R36;  F R11 R67  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	3-<10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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· **Ingredients according to Regulation (EC) No 648/2004:**

cationic surfactants

15 - 30%

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing contaminated by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact:**
Instantly wash with water and soap and rinse thoroughly.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do.
Use eye protection.
Call a doctor immediately.
- **After swallowing:**
Do NOT induce vomiting.
Rinse out mouth and then drink plenty of water.
Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire:
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)
Carbon monoxide (CO) and Carbon dioxide (CO₂)
Can form explosive vapour-air mixtures.
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Keep people at a distance and stay on the windward side.
Wear protective clothing.
Do not breathe vapour.
Avoid contact with skin and eyes.
Ensure adequate ventilation.
Remove all ignition sources.

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- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Keep containers tightly sealed.
Open and handle container with care.
Avoid skin and eye contact under any circumstances.
Keep away from heat and direct sunlight.
Avoid breathing vapours.
Make sure that all applicable workplace limits are observed.
- **Information about protection against explosions and fires:**
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Flammable fume/air mixtures may be formed in empty containers.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe all local and national regulations for storage of water polluting products.
Observe regulations for storage of flammable liquids.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with oxidising and acidic materials.
Observe regulations for storage of flammable liquids.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Caution when reopening containers with broken seal.
Store in a locked cabinet or with access restricted to specifically instructed persons.
Store in a locked cabinet and out of the reach of children.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

· Components with critical values that require monitoring at the workplace:	
67-63-0 Propan-2-ol (3-<10%)	
WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm

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· DNELs

7173-51-5 Didecyldimethylammonium chloride

Dermal DNEL long-term exposure - systemic effects 8.6 mg/kg bw/d (worker)

Inhalative DNEL long-term exposure - systemic effects 18.2 mg/m³ (worker)

67-63-0 Propan-2-ol

Oral DNEL long-term exposure - systemic effects 26 mg/kg bw/d (general population)

Dermal DNEL long-term exposure - systemic effects 319 mg/kg bw/d (general population)

888 mg/kg bw/d (worker)

Inhalative DNEL long-term exposure - systemic effects 89 mg/m³ (general population)

500 mg/m³ (worker)

· PNECs

7173-51-5 Didecyldimethylammonium chloride

PNEC 2 µg/l (aqua (freshwater)) (Assessment factor 10)

0.29 µg/l (aqua (intermittent releases)) (Assessment factor 100)

0.2 µg/l (aqua (marine water)) (Assessment factor 100)

2.82 mg/kg (sediment (freshwater)) (Assessment factor 1)

0.28 mg/kg (sediment (marine water)) (Assessment factor 10)

1.4 mg/kg (soil) (Assessment factor 50)

0.595 mg/l (STP (sewage treatment plant)) (Assessment factor 10)

67-63-0 Propan-2-ol

PNEC 140.9 mg/l (aqua (freshwater)) (Assessment factor 1)

140.9 mg/l (aqua (intermittent releases)) (Assessment factor 1)

140.9 mg/l (aqua (marine water)) (Assessment factor 1)

552 mg/kg (sediment (freshwater))

552 mg/kg (sediment (marine water))

28 mg/kg (soil)

2251 mg/l (STP (sewage treatment plant)) (Assessment factor 1)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Instantly remove any contaminated garments.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Use skin protection cream for preventive skin protection.

Do not carry cleaning cloths impregnated with the product in trouser pockets.

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

· **Breathing equipment:**

If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.

· **Protection of hands:**

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

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.

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· **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.

· **Eye protection:** Tightly sealed safety glasses

· **Body protection:**

Boots

Use protective suit.

Body protection must be chosen depending on activity and possible exposure.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: liquid

Colour: blue

· **Smell:** solvent-like

· **Odour threshold:** no data available

· **pH-value (10 g/l) :** 6.5 - 8.0

· **Change in condition**

Melting point/Melting range: not determined

Boiling point/Boiling range: 80 °C

· **Flash point:** 45 °C (Abel-Penski cc DIN 51755)

· **Inflammability (solid, gaseous)** not applicable

· **Ignition temperature:** no data available

· **Decomposition temperature:** no data available

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of flammable air/vapour mixtures is possible.

· **Critical values for explosion:**

Lower: no data available

Upper: no data available

· **Oxidising properties** not classified as oxidising

· **Vapor pressure:** Not determined.

· **Density at 20 °C:** 0.9 g/cm³

· **Relative density** no data available

· **Vapour density (AIR = 1):** no data available

· **Evaporation rate** no data available

· **Solubility in / Miscibility with**

Water: fully miscible

· **Partition coefficient (n-octanol/water):** no data available

· **Viscosity:**

dynamic: no data available

kinematic: no data available

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· 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Sources of ignition

Heat

· 10.3 Possibility of hazardous reactions

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

Flammable fume/air mixtures may be formed in empty containers.

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials:

Strong oxidizing agents

Strong acids

· 10.6 Hazardous decomposition products:

Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

7173-51-5 Didecyldimethylammonium chloride

Oral LD50 238 mg/kg (rat) (OECD 401)

Dermal LD50 3342 mg/kg (rabbit)

67-63-0 Propan-2-ol

Oral LD50 3600 mg/kg (mouse)

4570 - 5045 mg/kg (rat)

6410 mg/kg (rabbit)

LDLo 3570 mg/kg (human)

Dermal LD50 12800 - 13400 mg/kg (rabbit)

Inhalative LC50/4 h 30 - 46.5 mg/l (rat)

· Primary irritant effect:

· **on the skin:** Corrosive to skin and mucous membranes.

· **on the eye:** Corrosive

· **Subacute to chronic toxicity:** no data available

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Corrosive

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

· **Sensitisation** No sensitizing effect known.

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- **Repeated dose toxicity** no data / no sufficient data available
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
According to present knowledge no CMR-effects known.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

7173-51-5 Didecyldimethylammonium chloride

EC10/16 h	0.13 mg/l (<i>pseudomonas putida</i>) (DIN 38412 Part 8)
EC50/3 h	27.2 mg/l (bacteria)
	11 mg/l (bacteria) (OECD 209)
EC50/48 h	0.057 mg/l (water flea (<i>daphnia magna</i>)) (OECD Guideline 202)
EbC50/96 h	0.026 mg/l (algae (<i>selenastrum capricornutum</i>)) (OECD 201)
ErC50/72 h	0.062 mg/l (algae (<i>pseudokirchneriella subcapitata</i>)) (OECD Guideline 201)
LC0/96 h	0.97 mg/l (zebra fish (<i>danio rerio</i>)) (OECD Guideline 203)
LC50/96 h	0.19 mg/l (fathead minnow (<i>pimephales promelas</i>)) (US-EPA)
	1.0 mg/l (rainbow trout (<i>oncorhynchus mykiss</i>)) (OECD 203)
NOEC	0.010 mg/l (water flea (<i>daphnia magna</i>)) ((exposure time: 21d) OECD 211)
	0.032 mg/l (zebra fish (<i>danio rerio</i>)) ((exposure time: 34d) OECD 210)

67-63-0 Propan-2-ol

EC50/24 h	> 1000 mg/l (water flea (<i>daphnia magna</i>))
EC50/48 h	13299 mg/l (water flea (<i>daphnia magna</i>))
IC50/72 h	> 1000 mg/l (algae (<i>Scenedesmus subspicatus</i>))
LC50/48 h	8970 mg/l (<i>leuciscus idus</i>)
LC50/96 h	9640 mg/l (fathead minnow (<i>pimephales promelas</i>))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Water hazard class 2 (Self-assessment): hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

· European waste catalogue:

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN-Number	UN2920
· ADR, IMDG, IATA	
· 14.2 UN proper shipping name	UN2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S.
· ADR	(DIDECYLDIMETHYLAMMONIUM CHLORIDE, ISOPROPANOL), ENVIRONMENTALLY HAZARDOUS
· IMDG	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE, ISOPROPANOL), MARINE POLLUTANT
· IATA	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE, ISOPROPANOL)
· 14.3 Transport hazard class(es)	
· ADR	
	  
· Class	8 (CF1) Corrosive substances.
· Label	8+3
· IMDG	
	  
· Class	8 Corrosive substances.
· Label	8+3
· IATA	
	 
· Class	8 Corrosive substances.
· Label	8+3
· 14.4 Packing group	II
· ADR, IMDG, IATA	
· 14.5 Environmental hazards:	
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Kemler Number:	83

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· EMS Number:	F-E,S-C
· 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Transport by post may be prohibited or restricted.
· ADR	
· Excepted quantities (EQ):	E2
· Limited quantities (LQ):	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category:	2
· Tunnel restriction code:	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN2920, CORROSIVE LIQUID, FLAMMABLE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE, ISOPROPANOL), ENVIRONMENTALLY HAZARDOUS, 8 (3), II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:**
Quantity limits according to "EC Seveso directive" should be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for changes:**
The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by *.
Changes in classification and labelling
- **Relevant phrases**
The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the product.
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.

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H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

R11 Highly flammable.

R22 Harmful if swallowed.

R34 Causes burns.

R36 Irritating to eyes.

R50 Very toxic to aquatic organisms.

R67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:**

C.S.B. GmbH Phone: +49 - 2151 - 652086-0

Düsseldorfer Str. 113 Fax: +49 - 2151 - 652086-9

47809 Krefeld / Germany

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **Sources:** These data are based on information submitted by pre-suppliers.