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

**1.1. Product identifier**

**Name of product** Aqua Clean AC1000  
Art-Nr 01.0001.00

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

**! Recommended intended purpose(s)**  
water treatment

**! Effect of the substance / the mixture**

The product is used as a biocide.

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

**Manufacturer/distributor** Yachticon A. Nagel GmbH  
Bürgermeister-Bombeck-Str. 1, D-22851 Norderstedt  
Phone +49 40 511 37 80, Fax +49 40 51 74 37  
E-Mail yachticon@yachticon.de  
Internet www.yachticon.de

**Advice**

Phone +49 40 511 37 80  
Fax +49 40 51 74 37  
E-mail (competent person):  
yachticon@yachticon.de

**1.4. Emergency telephone number**

**Emergency advice**

Phone +49 40 511 37 80  
This number is only available at office times.  
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**! SECTION 2: Hazards identification**

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

**! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]**

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Aquatic Chronic 1	H410	

**! Hazard statements for environmental hazards**

H410 Very toxic to aquatic life with long lasting effects.

**! Additional hints**

This mixture is classified as hazardous according to Regulation (EC) No 1272/2008 [GHS].

**2.2. Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**



GHS09

**! Signal word**  
Warning

**! Hazard statements for environmental hazards**  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**

**General**

P102 Keep out of reach of children.  
P103 Read label before use.

**! Prevention**

P273 Avoid release to the environment.

**! Response**

P391 Collect spillage.

**! Disposal**

P501 Dispose of contents/container to an approved waste handling.

**Additional information**

**Remark**

Use biocides safely. Always read the label and product information before use.

**2.3. Other hazards**

**Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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

**3.1. Substances**

not applicable

**3.2. Mixtures**

**Hazardous ingredients**

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
7440-22-4	231-131-3	silver ( Ag+)	< 0,01	Aquatic Acute 1, H400 M=1000 / Aquatic Chronic 1, H410 M=100

**REACH**

CAS No	Name	REACH registration number
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**Additional advice**

Biocidal active substance: Silver

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## ! SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### ! General information

Remove moisted clothing immediately.  
In the event of persistent symptoms receive medical treatment.

#### ! In case of inhalation

Ensure of fresh air.

#### ! In case of skin contact

In case of contact with skin wash off with water.

#### ! In case of eye contact

In case of contact with eyes rinse thoroughly with water.  
Remove contact lenses.

#### ! In case of ingestion

Do not induce vomiting.  
Rinse out mouth thoroughly with water.

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

No information available.

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

No information available.

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## ! SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### ! Suitable extinguishing media

Fire-extinguishing activities according to surrounding.  
Alcohol-resistant foam  
Dry fire-extinguishing substance  
Carbon dioxide  
Water spray jet

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

The product itself does not burn.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply ( isolated ).  
Wear full protective clothing.

#### ! Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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## ! SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Ensure adequate ventilation.  
Avoid skin and eye contact.  
Use personal protective clothing.

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### 6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

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

Take up dry.

Flush away residues with water.

After taking up the material dispose according to regulation.

### 6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

Emergency telephone number: see section 1

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## ! SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Take the usual precautions when handling with chemicals.

Handle in accordance with good industrial hygiene and safety practice.

#### General protective measures

Avoid contact with eyes and skin

#### Hygiene measures

Clean skin thoroughly after working.

At work do not eat, drink and smoke.

Remove soiled or soaked clothing immediately.

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

#### ! Further information on storage conditions

Keep container tightly closed and store at cool and aired place.

**Storage group** 12

### 7.3. Specific end use(s)

No information available.

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## ! SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

#### Respiratory protection

Not necessary with adequate exhaust ventilation.

#### ! Hand protection

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Nitril, 0,4 mm, 60 min, 480 min. e.g. "Camatril Profi" (KCL GmbH, Email: Vertrieb@kcl.de)

The selection of the suitable gloves does not only depend on different material, but also on further marks of quality and varies from manufacturer to manufacturer.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

#### Eye protection

safety goggles

**Other protection measures**

Light protective clothing.

**Appropriate engineering controls**

Ensure good ventilation, where necessary use fume hood.

**! SECTION 9: Physical and chemical properties**

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

<b>Appearance</b> liquid	<b>Colour</b> colourless	<b>Odour</b> odourless
<b>Odour threshold</b> not determined		

**Important health, safety and environmental information**

	Value	Temperature	at	Method	Remark
<b>pH value</b>	ca. 7				
<b>boiling point</b>	> 100 C				
<b>melting point</b>	< 0 °C				
<b>Flash point</b>					not applicable
<b>Vapourisation rate</b>	not determined				
<b>Flammable (solid)</b>	not determined				
<b>Flammability (gas)</b>	not determined				
<b>Ignition temperature</b>	not determined				
<b>Self ignition temperature</b>					The product is not self-igniting.
<b>Lower explosion limit</b>	not determined				
<b>Upper explosion limit</b>	not determined				
<b>Vapour pressure</b>	not determined				
<b>Relative density</b>	ca. 1 g/cm <sup>3</sup>	20 °C			
<b>Vapour density</b>	not determined				
<b>Solubility in water</b>					multimiscible
<b>Solubility/other</b>	not determined				
<b>Partition coefficient n-octanol/water (log P O/W)</b>	not determined				

	Value	Temperature	at	Method	Remark
<b>Decomposition temperature</b>	not determined				
<b>Viscosity</b>	not determined				
<b>Oxidising properties</b>	No information available.				
<b>Explosive properties</b>	The product is not explosive.				
<b>9.2. Other information</b>	No information available.				

## ! SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable under normal conditions of use.  
 Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Under influence of acids, and through slow hydrolysis in aqueous solution, formation of carbon disulphide.

### 10.4. Conditions to avoid

No information available.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

Concerning possible decomposition products see section 5.

### Thermal decomposition

Remark No decomposition if used as directed.

## ! SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
<b>LD50 acute oral</b>	3000 mg/kg	rat		Information concerns to main component.
<b>LD50 acute dermal</b>	> 1000 mg/kg	rabbit		Information refers to main component.
<b>Skin irritation</b>	non-irritant			

	Value/Validation	Species	Method	Remark
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**Eye irritation** low irritant

**Skin sensitization**

No known sensitization.

**Sensitization  
respiratory  
system**

No known sensitization.

**! Experiences made from practice**

Inhalation of vapors may cause headache, drowsiness and dizziness.  
Frequent persistent contact with the skin may cause skin irritation.

**Additional information**

The product should be handled with the care usual when dealing with chemicals.  
Further hazardous properties can not be excluded.

**! SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicological effects**

	Value	Species	Method	Validation
<b>Fish</b>	LC50 > 1000 g/m <sup>3</sup> (96 h)	Pimephales promelas		Information refers to main component.

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Other adverse effects**

**General regulation**

Do not allow uncontrolled leakage of product into the environment.

**! SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Recommendations for the product**

There are no harmonised regulations on the disposal of chemicals in the member states of the EU. In Germany the Recycling and Waste Management Act (KrWG) stipulates recycling as a requirement. This means that a distinction must be made between "wastes for recycling" and "wastes for disposal". Particular aspects - in the main concerning delivery - are also governed by the Laender.

**! Recommendations for packaging**

Totally emptied packaging may be taken for recycling.  
Totally emptied packaging may be treated as household waste.

Disposal according to official regulations.

**Recommended cleansing agent**

water

**General information**

Allocation of the waste number has to be done according to the EWC directive industry- and process-specific.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA-DGR</b>
<b>14.1. UN number</b>	3082	3082	3082
<b>14.2. UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (silver ( Ag+))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N. O.S. (silver ( Ag+))	Environmentally hazardous substance, liquid, n.o.s. (silver ( Ag+))
<b>14.3. Transport hazard class(es)</b>	9	9	9
<b>14.4. Packing group</b>	III	III	III
<b>14.5. Environmental hazards</b>	Yes	Yes	Yes

**14.6. Special precautions for user**

No information available.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available.

**Land and inland navigation transport ADR/RID**

Hazard label(s) 9  
 tunnel restriction code E  
 Classification code M6

**Marine transport IMDG**

MARINE POLLUTANT

**Transport/further information**

No dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.

**! SECTION 15: Regulatory information**

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

**National regulations**

**Water hazard class** 1 following VwVwS slightly hazardous to water



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**15.2. Chemical Safety Assessment**

No information available.

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**! SECTION 16: Other information**

**Recommended uses and restrictions**

National and local regulations concerning chemicals shall be observed.

**Further information**

The national special regulations have to be implemented by each user their own responsibility!  
The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Please note: Our Material Safety Data Sheets have been prepared in accordance with EU directives, WITHOUT taking into account the specific national regulations for handling hazardous materials and chemicals.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.4

**! Sources of key data used**

Data sheets of the suppliers.

Federal Environment Agency (water hazard classes)