

Article No.: 605050 aquanol 02
Print date: 09.11.2022 Revision date: 09.11.2022 EN
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Article No. (manufacturer/supplier): 605050
Trade name/designation aquanol 02

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

Relevant identified uses

Preservative
Industrial use; Professional use

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

aqua plus Wasser- und Recyclingsysteme GmbH
Am Barnberg 14 Telephone: +49 (0) 7173 - 714418 0
D-73560 Böbingen an der Rems Telefax: +49 (0) 7173 - 714418 15

Department responsible for information:

E-mail info@aqua-plus.de

1.4. Emergency telephone number

Emergency telephone number +49 (0) 7173 - 714418 0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Met. Corr. 1 / H290	Corrosive to metals	May be corrosive to metals.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

2.2. Label elements

The product is classified and labelled according to EC directives or corresponding national laws.

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

Hazard pictograms



Danger

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe vapour.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye/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 [or 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.
P310 Immediately call a POISON CENTER or doctor/ physician.

Hazard components for labelling

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potassium hydroxide
1,2-benzisothiazol-3(2H)-one
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

Supplemental hazard information

not applicable

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
220-120-9 2634-33-5 613-088-00-6	1,2-benzisothiazol-3(2H)-one Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / Aquatic Acute 1 H400 / Aquatic Chronic 2 H411 / EUH071 Specific concentration limit (SCL): Skin Sens. 1 H317 >= 0,05	4 - 5,5
219-145-8 2372-82-9	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine Acute Tox. 3 H301 / Skin Corr. 1A H314 / Eye Dam. 1 H318 / STOT RE 2 H373 / Aquatic Acute 1 H400 (M = 10) / Aquatic Chronic 1 H410 (M = 1)	2 - 3,5
215-181-3 1310-58-3 019-002-00-8	potassium hydroxide Acute Tox. 4 H302 / Skin Corr. 1A H314 / Eye Dam. 1 H318 / Met. Corr. 1 H290 Specific concentration limit (SCL): Skin Corr. 1A H314 >= 5 / Skin Corr. 1B H314 >= 2 / Skin Irrit. 2 H315 >= 0,5 / Eye Irrit. 2 H319 >= 0,5	0,5 - 1,5
223-296-5 3811-73-2	2-Pyridinethiol-1-oxide sodium salt Acute Tox. 4 H302 / Acute Tox. 3 H311 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Aquatic Acute 1 H400 (M = 100) / Aquatic Chronic 1 H410 (M = 10)	0,5 - 1,5

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners. Consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Seek medical advice immediately.

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

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In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2. Special hazards arising from the substance or mixture

Do not breathe gas/fumes/vapour/spray.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device.

Additional information

Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Use only with sufficient ventilation. Refer to chapter 8. : Exposure controls / Personal protection

Further information

Respiratory protection necessary at: aerosol or mist formation

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep/Store only in original container.

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO).

Further information on storage conditions

Take care of instructions on label. Protect from heat and direct sunlight. Protect from frost.

7.3. Specific end use(s)

No measures required.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

potassium hydroxide

Index No. 019-002-00-8 / EC No. 215-181-3 / CAS No. 1310-58-3

STEL: 2 mg/m³

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Additional information

TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value
Ceiling : peak limitation

DNEL:

potassium hydroxide
Index No. 019-002-00-8 / EC No. 215-181-3 / CAS No. 1310-58-3
DNEL long-term inhalative (local), Workers: 1 mg/m³
DNEL long-term inhalative (local), Consumer: 1 mg/m³

8.2. Exposure controls

Personal protection equipment

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values. Use only respiratory protection equipment with CE-symbol including four digit test number. Combination filtering device Filter type: ABEK

Hand protection

Wear protective gloves. Recommended glove articles according EN ISO 374. Recommendation for protection against the commonly occurring ingredients in the products: For short-term contact (e.g. splash guard): Suitable material: Nitriles, Butyl caoutchouc (butyl rubber), material thickness: $\geq 0,4$ mm, Penetration time of glove material depending on intensity and duration of exposure to skin: ≥ 480 min. The exact break through time can be found out by the manufacturer of the protective gloves and has to be observed. The protective gloves should always be checked for their suitability for specific workplaces (e.g. mechanical resistance, product compatibility). Follow the glove manufacturer's instructions and information on how to use, store, care for and replace gloves. The protective gloves should be replaced immediately if they are damaged or the first signs of wear and tear.

Eye/face protection

Wear eye glasses with side protection according to EN 166.

Body protection

Suitable protective clothing: Protective clothing. Type 6 DIN EN 13034

Protective measures

Avoid contact with eyes and skin.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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Physical state:	Liquid
Appearance:	Liquid
Colour:	yellow
Odour:	characteristic
Odour threshold:	not applicable
Melting point/freezing point	not determined
Initial boiling point and boiling range:	100 °C
Flammability:	Combustible liquid.
Lower and upper explosion limit:	
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Flash point:	> 100 °C Auto-
ignition temperature:	288 °C
Decomposition temperature:	not determined
pH at 20 °C:	9 / 0,2 weight-%
Viscosity at °C:	liquid
Solubility(ies):	

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Water solubility at 20 °C:	951
Partition coefficient: n-octanol/water:	see section 12
Vapour pressure at 20 °C:	not determined
Density and/or relative density:	
Density at 20 °C:	1,029 g/cm³
	Method: Ph. Eur. 2.2.5
Relative vapour density:	not determined
particle characteristics:	not applicable

9.2. **Other information**

No further relevant information available.

SECTION 10: Stability and reactivity

10.1. **Reactivity**

No information available.

10.2. **Chemical stability**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**

No known hazardous reactions.

10.4. **Conditions to avoid**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

Reducing agent, Oxidising agent.

10.6. **Hazardous decomposition products**

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: Nitrogen oxides (NO_x) Carbon monoxide (CO) Sulfur dioxide, Hydrogen chloride (HCl)

SECTION 11: Toxicological information

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

Acute toxicity

1,2-benzisothiazol-3(2H)-one

oral, LD50, Rat: 454 mg/kg

2-Pyridinethiol-1-oxide sodium salt

oral, LD50, Rat: 1208 mg/kg

dermal, LD50, Rabbit: 720 mg/kg

inhalative (vapours), LC50, Rat (4 h)

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

oral, LD50, Rat: 243,6 mg/kg

Method: OECD 401

potassium hydroxide

oral, LD50, Rat: < 333 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Corrosive

Causes severe skin burns and eye damage.

potassium hydroxide

Skin (4 h)

eyes

Respiratory or skin sensitisation

sensitising

May cause an allergic skin reaction.

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CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

STOT-single exposure; 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.

Practical experience/human evidence

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

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

Do not allow to enter into surface water or drains.

12.1. Toxicity

Very toxic to aquatic organisms.

1,2-benzisothiazol-3(2H)-one

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,15 mg/L (96 h)

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 2,9 mg/L (48 h)

2-Pyridinethiol-1-oxide sodium salt

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 0,0066 mg/L (96 h)

Daphnia toxicity, EC50, Daphnia magna: 0,022 mg/L (48 h)

Algae toxicity, ErC50, Selenastrum capricornutum: 0,46 mg/L

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 0,68 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 0,073 mg/L (48 h)

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 0,054 mg/L (96 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

1,2-benzisothiazol-3(2H)-one

Fish toxicity, LC50 (96 h)

Algae toxicity, ErC50 (72 h)

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

Fish toxicity, LC50, Lepomis macrochirus (Bluegill): 0,45 mg/L (96 h)

Algae toxicity, ErC50, Desmodesmus subspicatus.: 0,012 mg/L (72 h)

Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 0,024 mg/L (21 day(s))

Algae toxicity, NOEC, Desmodesmus subspicatus.: 0,0069 mg/L (72 hour(s))

12.2. Persistence and degradability

Toxicological data are not available.

12.3. Bioaccumulative potential

1,2-benzisothiazol-3(2H)-one

Partition coefficient: n-octanol/water: 0,7

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

Partition coefficient: n-octanol/water: 0,34

Bioconcentration factor (BCF)

1,2-benzisothiazol-3(2H)-one

Bioconcentration factor (BCF): 6,95

12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product

Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way.

List of proposed waste codes/waste designations in accordance with EWC

160305* organic wastes containing hazardous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number or ID number

UN 1719

14.2. UN proper shipping name

Land transport (ADR/RID):

Caustic alkali liquid, n.o.s.
(potassium hydroxid, (N,N-Bis (3-aminopropyl) dodecylamine))

Sea transport (IMDG):

CAUSTIC ALKALI LIQUID, N.O.S.
(potassium hydroxid, (N,N-Bis (3-aminopropyl) dodecylamine),
pyridine-2-thiol 1-oxide, natrium salt)

Air transport (ICAO-TI / IATA-DGR):

Caustic alkali liquid, n.o.s.
(potassium hydroxid, (N,N-Bis (3-aminopropyl) dodecylamine))

14.3. Transport hazard class(es)

8

14.4. Packing group

II

14.5. Environmental hazards

Land transport (ADR/RID)

ENVIRONMENTALLY HAZARDOUS

Marine pollutant

p / pyridine-2-thiol 1-oxide, natrium salt

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code

E

Sea transport (IMDG)

EmS-No.

F-A, S-B

in packages <= 5 litres

not restricted 2.10.2.7

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

EU legislation

Restrictions of occupation:

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Regulation (EU) No. 528/2012 on biocides

biocidal product

biocide, active substance

1,2-benzisothiazol-3(2H)-one	47,6 g/kg
2-Pyridinethiol-1-oxide sodium salt	10 g/kg
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	30 g/kg
Input	0.5-2.0 g/kg

Authorization number for biocidal products:

PT6

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC-value (in g/L): 0,0

National regulations

15.2. Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

EC No. CAS No.	Designation	REACH No.
215-181-3 1310-58-3	potassium hydroxide	01-2119487136-33

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Acute Tox. 3 / H301	Acute toxicity (oral)	Toxic if swallowed.
Skin Corr. 1A / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.
Met. Corr. 1 / H290	Corrosive to metals	May be corrosive to metals.
Acute Tox. 3 / H311	Acute toxicity (dermal)	Toxic in contact with skin.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Met. Corr. 1	Corrosive to metals	On basis of test data.
Skin Corr. 1B	Skin corrosion/irritation	Calculation method.
Eye Dam. 1	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.
Aquatic Acute 1	Hazardous to the aquatic environment	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
FAKV	European Waste Catalogue Directive

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

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EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

* Data changed compared with the previous version