

## V4202SS

Version number: 12.0  
SDS Identifier: V4202SS

Revision: 2023-11-08

### SECTION 1: Identification

#### 1.1 Product identifier

SDS Identifier **V4202SS**  
Catalog numbers A-4202, A-4402, A-7905, S-4202, S-4402, S-7905

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

Relevant identified uses Components of water analysis test kits

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

AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover PA 17331  
United States

Telephone: (717) 632-1291  
e-mail: [info@aquaphoenixsci.com](mailto:info@aquaphoenixsci.com)  
Website: <https://www.aquaphoenixsci.com/>

e-mail (competent person) [scraig@aquaphoenixsci.com](mailto:scraig@aquaphoenixsci.com) (Stephen Craig)

#### 1.4 Emergency telephone number

Emergency information service ChemTel Inc.: 1-800-255-3924, +01-813-248-0585

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to GHS

Hazard class	Category	Hazard class and category	Hazard statement
acute toxicity (oral)	4	Acute Tox. 4	H302
skin corrosion/irritation	1A	Skin Corr. 1A	H314
serious eye damage/eye irritation	1	Eye Dam. 1	H318

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.

#### 2.2 Label elements

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#### Labeling

- Signal word                    danger

- Pictograms

GHS05, GHS07



- Hazard statements

H302                                Harmful if swallowed.

H314                                Causes severe skin burns and eye damage.

- Precautionary statements

P260                                Do not breathe dusts or mists.

P264+P265                        Wash hands thoroughly after handling. Do not touch eyes.

P270                                Do not eat, drink or smoke when using this product.

P280                                Wear eye protection/face protection.

P301+P317                        IF SWALLOWED: Get medical help.

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

P302+P361+P354                IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

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

P305+P354+P338                IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P316                                Get emergency medical help immediately.

P321                                Specific treatment (see on this label).

P363                                Wash contaminated clothing before reuse.

P405                                Store locked up.

P501                                Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling                                potassium hydroxide

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0.1\%$ .

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\geq 0.1\%$ .

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### 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
potassium hydroxide	CAS No 1310-58-3	57	Acute Tox. 4 / H302 Skin Corr. 1A / H314 Eye Dam. 1 / H318	
deionized water	CAS No 7732-18-5	43		

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. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

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

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### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

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

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate 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 vapors/dust/aerosols/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

#### 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

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

##### Recommendations

Wear impact- and splash-resistant eyewear.

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

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

- Handling of incompatible substances or mixtures

Do not mix with acids.

##### 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 feedingsuffs.

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

##### Control of the effects

Protect against external exposure, such as

heat, high temperatures, light, UV-radiation/sunlight

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

### 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/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	potassium hydroxide	1310-58-3	REL						2		NIOSH REL
US	potassium hydroxide	1310-58-3	TLV®						2		ACGIH® 2023
US	potassium hydroxide (caustic potash)	1310-58-3	PEL (CA)						2		Ca/ OSHA PEL

Notation

Ceiling-C

STEL

ceiling value is a limit value above which exposure should not occur

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)

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#### Notation

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						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
potassium hydroxide	1310-58-3	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

## 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. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### - Other protection measures

Wash hands thoroughly after handling.

#### 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

Product description: Plastic bottle, contains approximately 9 mL of liquid reagent. Test kits and PAA Standard contain one (1) bottle of solution. Activator Solution packs contain six (6) bottles of solution

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Physical state	liquid
Color	colorless
Odor	odorless
Melting point/freezing point	<0 °C
Boiling point or initial boiling point and boiling range	112 °C
Evaporation rate	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	13 – 14 (base)
Kinematic viscosity	not determined

#### Solubility(ies)

Water solubility	miscible in any proportion
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#### Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapor pressure	23.7 mmHg at 25 °C
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#### Density and/or relative density

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Density	not determined
Relative vapour density	information on this property is not available
Relative density	1.4 (water = 1)
Particle characteristics	not relevant (liquid)

### 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

There is no additional information.

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

#### 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).



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#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Harmful if swallowed.

##### - Acute toxicity estimate (ATE)

Oral 584.2 mg/kg

##### Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
potassium hydroxide	1310-58-3	oral	333 mg/kg

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

##### 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.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 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  $\geq 0.1\%$ .

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\geq 0.1\%$ .

#### 12.7 Other adverse effects

Data are not available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

#### 14.1 UN number

DOT	UN 1814
IMDG-Code	UN 1814
ICAO-TI	UN 1814

#### 14.2 UN proper shipping name

DOT	Potassium hydroxide solutions
IMDG-Code	POTASSIUM HYDROXIDE SOLUTION
ICAO-TI	Potassium hydroxide solution

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#### 14.3 Transport hazard class(es)

DOT	8
IMDG-Code	8
ICAO-TI	8

#### 14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

#### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

#### 14.6 Other relevant information


Shipping container markings and labels, received from CHEMetrics, may vary from the above information. Products that are regulated for transport will be packaged by CHEMetrics as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations. CHEMetrics may also elect to ship certain products as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III. In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.

#### 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

##### Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information


Particulars in the shipper's declaration	UN1814, Potassium hydroxide solutions, 8, II
Reportable quantity (RQ)	1,754 lbs (796.5 kg) (potassium hydroxide)
Danger label(s)	8
	
Special provisions (SP)	B2, IB2, T7, TP2
ERG No	154

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### International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	-
Danger label(s)	8
	
Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B
Stowage category	A
Segregation group	18 - Alkalis

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

Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

#### National regulations (United States)

**Toxic Substance Control Act (TSCA)** all ingredients are listed (ACTIVE) or exempt from listing

#### Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

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#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	Remarks	Statutory code	Final RQ pounds (Kg)
potassium hydroxide		1	1000 (454)

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

#### Clean Air Act

none of the ingredients are listed

#### Right to Know Hazardous Substance List

- Hazardous Substance List (NJ-RTK)

Name of substance	Remarks	Classifications
potassium hydroxide		CO R1

Legend

CO Corrosive  
R1 Reactive - First Degree

#### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

#### National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed

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Country	Inventory	Status
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)
VN	NCI	all ingredients are listed

#### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information, including date of preparation or last revision

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: <a href="http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement">http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement</a>
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)

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Abbr.	Descriptions of used abbreviations
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

#### Key literature references and sources for data

Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

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Transport of dangerous goods by road or rail (49 CFR US DOT). 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
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

#### Disclaimer

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