Scroll down for all Safety Data Sheets (SDS) for this product.

Total Enclosures: 2

Safety Data Sheet

Version number: 10.1
SDS# A7925

2021-03-10

SECTION 1: Identification

1.1 Product identifier

Trade name **A-7925 Double Tipped Ampoules**

Other means of identification PAA Standard

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

Component of water analysis test kits: A-7925

1.3 Details of the supplier of the safety data sheet

CHEMetrics, Inc.
4295 Catlett Road
Midland VA 22728
United States

Telephone: 1-540-788-9026
Telefax: 1-540-788-4856
e-mail: technical@chemetrics.com
Website: www.chemetrics.com

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 OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.6	carcinogenicity	1A	Carc. 1A	H350
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

2.2 Label elements

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

- Signal word danger

- Pictograms

GHS07, GHS08

- Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

- Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P321	Specific treatment (see on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

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
water	CAS No 7732-18-5	86.9		
Acetic acid	CAS No 64-19-7	12.5	Skin Corr. 1A / H314 Eye Dam. 1 / H318 Flam. Liq. 3 / H226	
sulfuric acid	CAS No 7664-93-9	0.55	Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 Carc. 1A / H350	
Hydrogen peroxide	CAS No 7722-84-1	0.02	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Corr. 1A / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 Ox. Liq. 1 / H271	

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Peracetic acid	CAS No 79-21-0	0.003	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 2 / H330 Skin Corr. 1A / H314 STOT SE 3 / H335 Flam. Liq. 4 / H227 Org. Perox. D / H242	

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.

SECTION 5: Fire-fighting 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. 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

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

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

- Keep away from

Caustic solutions

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

- Packaging compatibilities

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

7.3 Other information

For optimum analytical performance, store in the dark and at room temperature.

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
US	acetic acid	64-19-7	PEL (CA)	10	25	15	37	40			Cal/OSHA PEL
US	acetic acid	64-19-7	REL	10 (10 h)	25 (10 h)	15	37				NIOSH REL
US	acetic acid	64-19-7	TLV®	10		15					ACGIH® 2019
US	acetic acid	64-19-7	PEL	10	25						29 CFR 1910.1000
US	sulfuric acid	7664-93-9	PEL (CA)		0.1		3				Cal/OSHA PEL
US	sulfuric acid	7664-93-9	REL		1 (10 h)						NIOSH REL
US	sulfuric acid	7664-93-9	PEL		1						29 CFR 1910.1000
US	sulfuric acid	7664-93-9	TLV®		0.2					t	ACGIH® 2019
US	hydrogen peroxide	7722-84-1	PEL (CA)	1	1.4						Cal/OSHA PEL
US	hydrogen peroxide	7722-84-1	REL	1 (10 h)	1.4 (10 h)						NIOSH REL
US	hydrogen peroxide	7722-84-1	TLV®	1							ACGIH® 2019
US	hydrogen peroxide	7722-84-1	PEL	1	1.4						29 CFR 1910.1000
US	peracetic acid	79-21-0	TLV®			0.4				iv	ACGIH® 2019

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
iv	inhalable fraction and vapor
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)
t	thoracic fraction

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 of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sulfuric acid	7664-93-9	DNEL	0.05 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
sulfuric acid	7664-93-9	DNEL	0.1 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Hydrogen peroxide	7722-84-1	DNEL	1.4 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Hydrogen peroxide	7722-84-1	DNEL	3 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Peracetic acid	79-21-0	DNEL	0.56 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Peracetic acid	79-21-0	DNEL	0.56 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Peracetic acid	79-21-0	DNEL	0.56 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Peracetic acid	79-21-0	DNEL	0.56 mg/m³	human, inhalatory	worker (industry)	acute - local effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
sulfuric acid	7664-93-9	PNEC	0.003 mg/l	aquatic organisms	freshwater	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	8.8 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
sulfuric acid	7664-93-9	PNEC	0.002 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	0.013 mg/l	aquatic organisms	freshwater	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	0.013 mg/l	aquatic organisms	marine water	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	4.66 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	0.047 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	0.047 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Hydrogen peroxide	7722-84-1	PNEC	0.002 mg/kg	terrestrial organisms	soil	short-term (single instance)
Peracetic acid	79-21-0	PNEC	0 mg/l	aquatic organisms	freshwater	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Peracetic acid	79-21-0	PNEC	0 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
Peracetic acid	79-21-0	PNEC	0.051 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Peracetic acid	79-21-0	PNEC	0 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
Peracetic acid	79-21-0	PNEC	0 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
Peracetic acid	79-21-0	PNEC	0.32 $^{mg}/_{kg}$	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. 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

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. 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 Double tipped ampoules containing 3 mL of liquid reagent. Each A-7925 contains 10 ampoules.

Appearance

Physical state	liquid
Color	colorless
Odor	sharp

Other safety parameters

pH (value)	1.4 (acid)
Melting point/freezing point	not determined
Initial boiling point and boiling range	117.9 °C at 101.3 kPa
Flash point	118 °C at 101.3 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)

Explosive limits

- Lower explosion limit (LEL)	4 vol%
- Upper explosion limit (UEL)	19.9 vol%

Vapor pressure	20.79 hPa at 25 °C
Density	not determined
Vapor density	this information is not available
Relative density	1 (water = 1)

Solubility(ies)

- Water solubility	miscible in any proportion

Partition coefficient

- n-octanol/water (log KOW)	this information is not available

Auto-ignition temperature	463 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

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

Oxidizers

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).

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

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
sulfuric acid	7664-93-9	inhalation: vapor	3 $^{mg}/_{l}$/4h
sulfuric acid	7664-93-9	inhalation: dust/mist	0.85 $^{mg}/_{l}$/4h
Hydrogen peroxide	7722-84-1	oral	1,026 $^{mg}/_{kg}$
Hydrogen peroxide	7722-84-1	inhalation: vapor	11 $^{mg}/_{l}$/4h
Peracetic acid	79-21-0	inhalation: vapor	0.5 $^{mg}/_{l}$/4h
Peracetic acid	79-21-0	inhalation: dust/mist	0.204 $^{mg}/_{l}$/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

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

May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
Hydrogen peroxide	7722-84-1	3	
sulfuric acid	7664-93-9	1	

Legend
1 Carcinogenic to humans
3 Not classifiable as to carcinogenicity in humans

National Toxicology Program (United States): Report on Carcinogens

Name of substance	CAS No	Classification	Number
sulfuric acid	7664-93-9	Known to be a human carcinogen	9th Report on Carcinogens

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.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetic acid	64-19-7	LC50	>1,000 $^{mg}/_{l}$	fish	96 h
Acetic acid	64-19-7	EC50	>1,000 $^{mg}/_{l}$	aquatic invertebrates	48 h
Acetic acid	64-19-7	ErC50	>1,000 $^{mg}/_{l}$	algae	72 h
sulfuric acid	7664-93-9	EC50	>100 $^{mg}/_{l}$	aquatic invertebrates	48 h
sulfuric acid	7664-93-9	ErC50	>100 $^{mg}/_{l}$	algae	72 h
Hydrogen peroxide	7722-84-1	LC50	16.4 $^{mg}/_{l}$	fish	96 h
Hydrogen peroxide	7722-84-1	ErC50	1.38 $^{mg}/_{l}$	algae	72 h
Peracetic acid	79-21-0	LC50	0.53 $^{mg}/_{l}$	fish	96 h
Peracetic acid	79-21-0	EC50	0.73 $^{mg}/_{l}$	aquatic invertebrates	48 h
Peracetic acid	79-21-0	ErC50	0.16 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hydrogen peroxide	7722-84-1	EC50	466 $^{mg}/_{l}$	microorganisms	30 min
Peracetic acid	79-21-0	EC50	38.6 $^{mg}/_{l}$	microorganisms	3 h

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

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

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 2790
IMDG-Code	UN 2790
ICAO-TI	UN 2790

14.2 UN proper shipping name — UN2790, Acetic acid solutions, 8, III

DOT	Acetic acid solutions
IMDG-Code	ACETIC ACID SOLUTION
ICAO-TI	Acetic acid solution

14.3 Transport hazard class(es)

DOT	8
IMDG-Code	8
ICAO-TI	8

14.4 Packing group

DOT	III
IMDG-Code	III
ICAO-TI	III

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 Transport in bulk according to Annex II of MARPOL and the IBC Code

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

Reportable quantity (RQ)	40,032 lbs (18,175 kg) (Acetic acid) (sulfuric acid)
Danger label(s)	8

Special provisions (SP)	148, IB3, T4, TP1
ERG No	153

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	-
Danger label(s)	8

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Segregation group	1 - Acids

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

Danger label(s)	8

Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 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

Superfund Amendment and Reauthorization Act (SARA TITLE III)

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

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities				
Name of substance	**CAS No**	**Notes**	**Reportable quantity (pounds)**	**Threshold planning quantity (pounds)**
Hydrogen peroxide	7722-84-1	f	1,000	1000
sulfuric acid	7664-93-9		1,000	1000
Peracetic acid	79-21-0		500	500

Legend
f Chemical on the original list that does not meet toxicity criteria but because of its acute lethality, high production volume and known risk is considered chemical of concern ("Other chemicals"). (November 17, 1986, and February 15, 1990.)

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	**CAS No**	**Remarks**	**Effective date**
sulfuric acid	7664-93-9	acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size	1986-12-31
Peracetic acid	79-21-0		1986-12-31

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	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Acetic acid	64-19-7		1	5000 (2270)
sulfuric acid	7664-93-9		1	1000 (454)

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

Clean Air Act

Name of substance	CAS No	Type of registration	Basis for listing	Threshold quantity (lbs)
Peracetic acid	79-21-0	Toxic substance	b	10000

Legend
b On EHS list, vapor pressure 10 mmHg or greater.

Right to Know Hazardous Substance List

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Acetic acid	64-19-7		CO F2
Hydrogen peroxide	7722-84-1		CO MU R3
sulfuric acid	7664-93-9		CA CO R2
Peracetic acid	79-21-0		CO F2 R4

Legend

CA	Carcinogenic
CO	Corrosive
F2	Flammable - Second Degree
MU	Mutagenic
R2	Reactive - Second Degree
R3	Reactive - Third Degree
R4	Reactive - Fourth Degree

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

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
US	TSCA	all ingredients are listed
CA	DSL/NDSL	all ingredients are listed
AU	AICS	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
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
DSL/NDSL	Domestic Substances List (DSL)/Non-domestic Substances List (NDSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals 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

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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 chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapor.
H227	Combustible liquid.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidizer.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H412	Harmful 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.

Safety Data Sheet

Version number: 10.2
SDS# S4202

2021-05-21

SECTION 1: Identification

1.1 Product identifier

Trade name **A-4202, A-4402, A-7905**

Other means of identification Activator Solution for Formaldehyde CHEMets®, VACUettes®, & Vacu-vials® Kits, and for Glycol CHEMets® Kits. Stabilizer Solution for PAA Standard.

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

Component of water analysis test kits: A-7925, K-4203I, K-4605, K-4605A, K-4605B, K-4605C, K-4605D, K-4815

1.3 Details of the supplier of the safety data sheet

CHEMetrics, Inc.
4295 Catlett Road
Midland VA 22728
United States

Telephone: 1-540-788-9026
Telefax: 1-540-788-4856
e-mail: technical@chemetrics.com
Website: www.chemetrics.com

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 OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1O	acute toxicity (oral)	4	Acute Tox. 4	H302
A.2	skin corrosion/irritation	1A	Skin Corr. 1A	H314
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

2.2 Label elements

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

- 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.
P270	Do not eat, drink or smoke when using this product.
P280	Wear 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.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
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.
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.

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	
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.

SECTION 5: Fire-fighting 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. 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

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

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. Never add water to this product.

- 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 feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

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

7.3 Other information

For optimum analytical performance, store in the dark and at room temperature.

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
US	potassium hydroxide	1310-58-3	REL						2		NIOSH REL
US	potassium hydroxide	1310-58-3	TLV®						2		ACGIH® 2021
US	potassium hydroxide (caustic potash)	1310-58-3	PEL (CA)						2		Cal/ OSHA PEL

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
potassium hydroxide	1310-58-3	DNEL	1 mg/m³	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

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. 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.

Appearance

Physical state	liquid
Color	colorless
Particle	not relevant (liquid)
Odor	odorless

Other safety parameters

pH (value)	13 – 14 (base)
Melting point/freezing point	<0 °C
Initial boiling point and boiling range	112 °C
Flash point	not determined
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	not determined
Density	not determined
Vapor density	this information is not available
Relative density	1.4 (water = 1)

Solubility(ies)

- Water solubility	miscible in any proportion

Partition coefficient

- n-octanol/water (log KOW)	this information is not available

Auto-ignition temperature	not determined
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

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

Oxidizers

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).

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 of the mixture

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.

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

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

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 UN1814, Potassium hydroxide solutions, 8, II

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

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 Transport in bulk according to Annex II of MARPOL and the IBC Code

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

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

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
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

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

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	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
potassium hydroxide	1310-58-3		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	CAS No	Remarks	Classifications
potassium hydroxide	1310-58-3		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

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AICS	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
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
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

Legend

AICS	Australian Inventory of Chemical Substances
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
KECI	Korea Existing Chemicals 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

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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 chapter 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.