

Safety Data Sheet

V9011SS

Version number: 12.0
SDS Identifier: V9011SS

Revision: 2023-11-08

SECTION 1: Identification

1.1 Product identifier

SDS Identifier **V9011SS**
Catalog numbers R-9011

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
Website: <https://www.aquaphoenixsci.com/>

e-mail (competent person) 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
skin corrosion/irritation	3	Skin Irrit. 3	H316
reproductive toxicity	2	Repr. 2	H361d
specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

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Labeling

- Signal word warning

- Pictograms

GHS08



- Hazard statements

H316	Causes mild skin irritation.
H361d	Suspected of damaging the unborn child (if exposed).
H373	May cause damage to organs (kidney, liver) through prolonged or repeated exposure.

- Precautionary statements

P203	Obtain, read and follow all safety instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P318	IF exposed or concerned, get medical advice.
P319	Get medical help if you feel unwell.
P332+P317	If skin irritation occurs: Get medical help.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling ethylene glycol

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 $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures





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Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
deionized water	CAS No 7732-18-5	≥ 82		
ethylene glycol	CAS No 107-21-1	3 – 11	Acute Tox. 4 / H302 Acute Tox. 5 / H313 Repr. 2 / H361d STOT RE 2 / H373	
sodium bisulfite	CAS No 7631-90-5	1 – 3	Acute Tox. 4 / H302 Acute Tox. 5 / H313 Acute Tox. 5 / H333 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Aquatic Acute 3 / H402	
sodium sulfite	CAS No 7757-83-7	≤ 1	Acute Tox. 5 / H303 Acute Tox. 5 / H313 Acute Tox. 5 / H333 Aquatic Acute 3 / H402	
1-amino-2-naphthol-4-sulfonic acid	CAS No 116-63-2	≤ 1		
methanol	CAS No 67-56-1	≤ 0.8	Flam. Liq. 2 / H225 Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370	
sodium borohydride	CAS No 16940-66-2	≤ 0.01	Water-react. 1 / H260 Acute Tox. 3 / H301 Acute Tox. 5 / H313 Acute Tox. 4 / H332 Skin Corr. 1C / H314 Eye Dam. 1 / H318 Repr. 1B / H360F Aquatic Acute 3 / H402 Aquatic Chronic 3 / H412	

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.

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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

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.

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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. Break the ampoule tip only when it is completely immersed in sample. Breaking the tip in air may cause the glass ampoule to shatter.

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

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

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

Control of the effects

Protect against external exposure, such as

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

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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 ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	ethylene glycol	107-21-1	REL							appx-D	NIOSH REL
US	ethylene glycol	107-21-1	TLV®				10			i, aerosol	ACGIH® 2023
US	ethylene glycol	107-21-1	PEL (CA)					40	100	vap	Cal/OSHA PEL
US	ethylene glycol	107-21-1	TLV®	25		50				vap	ACGIH® 2023
US	methanol	67-56-1	TLV®	200		250				H	ACGIH® 2023
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325				NIOSH REL
US	methyl alcohol	67-56-1	PEL	200	260						29 CFR 1910.1000
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	1,000			Cal/OSHA PEL
US	sodium bisulfite	7631-90-5	PEL (CA)		5						Cal/OSHA PEL
US	sodium bisulfite	7631-90-5	REL		5 (10 h)						NIOSH REL
US	sodium bisulfite	7631-90-5	TLV®		5						ACGIH® 2023

Notation

aerosol	as aerosols
appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
H	absorbed through the skin
i	inhalable fraction
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)
vap	as vapors

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Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	methanol	methanol		BEI®	15 mg/l	ACGIH® 2023

Relevant DNELs of components

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethylene glycol	107-21-1	DNEL	35 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
ethylene glycol	107-21-1	DNEL	106 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
sodium bisulfite	7631-90-5	DNEL	246 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium sulfite	7757-83-7	DNEL	298 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
ethylene glycol	107-21-1	PNEC	10 mg/l	aquatic organisms	freshwater	short-term (single instance)
ethylene glycol	107-21-1	PNEC	1 mg/l	aquatic organisms	marine water	short-term (single instance)
ethylene glycol	107-21-1	PNEC	199.5 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
ethylene glycol	107-21-1	PNEC	37 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
ethylene glycol	107-21-1	PNEC	3.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

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Relevant PNECs of components						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
ethylene glycol	107-21-1	PNEC	1.53 mg/kg	terrestrial organisms	soil	short-term (single instance)
sodium bisulfite	7631-90-5	PNEC	1.09 mg/l	aquatic organisms	freshwater	short-term (single instance)
sodium bisulfite	7631-90-5	PNEC	0.11 mg/l	aquatic organisms	marine water	short-term (single instance)
sodium bisulfite	7631-90-5	PNEC	10.71 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
sodium sulfite	7757-83-7	PNEC	1.33 mg/l	aquatic organisms	freshwater	short-term (single instance)
sodium sulfite	7757-83-7	PNEC	0.13 mg/l	aquatic organisms	marine water	short-term (single instance)
sodium sulfite	7757-83-7	PNEC	99.9 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	20.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
methanol	67-56-1	PNEC	2.08 mg/l	aquatic organisms	marine water	short-term (single instance)
methanol	67-56-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	77 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
methanol	67-56-1	PNEC	7.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
methanol	67-56-1	PNEC	100 mg/kg	terrestrial organisms	soil	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	1.75 mg/l	aquatic organisms	freshwater	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	1.75 mg/l	aquatic organisms	marine water	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	54.77 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	2.55 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	0.255 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
sodium borohydride	16940-66-2	PNEC	4.8 mg/kg	terrestrial organisms	soil	short-term (single instance)

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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: Each ULR CHEMet™ ampoule is a 250 mm length glass ampoule containing approximately 1 mL of liquid reagent sealed under vacuum.

Physical state	liquid
Color	colorless to pale yellow
Odor	odorless
Melting point/freezing point	0 °C
Boiling point or initial boiling point and boiling range	100 °C at 1,013 hPa
Evaporation rate	not determined
Flammability	this material is combustible, but will not ignite readily

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Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	398 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	not relevant
pH (value)	5
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

Density	not determined
Relative vapour density	information on this property is not available
Relative density	1 (water = 1)

Particle characteristics	not relevant (liquid)
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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".

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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

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

Name of substance	CAS No	Exposure route	ATE
ethylene glycol	107-21-1	dermal	>3,500 mg/kg
sodium bisulfite	7631-90-5	oral	500 mg/kg
sodium bisulfite	7631-90-5	dermal	>2,000 mg/kg
sodium bisulfite	7631-90-5	inhalation: vapor	25 mg/l/4h
sodium bisulfite	7631-90-5	inhalation: dust/mist	>5.5 mg/l/4h
sodium sulfite	7757-83-7	oral	2,610 mg/kg
sodium sulfite	7757-83-7	dermal	>2,000 mg/kg
sodium sulfite	7757-83-7	inhalation: dust/mist	>5.5 mg/l/4h
methanol	67-56-1	oral	100 mg/kg
methanol	67-56-1	dermal	300 mg/kg

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Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
methanol	67-56-1	inhalation: vapor	3 mg _i /4h
sodium borohydride	16940-66-2	oral	56.57 mg _i /kg
sodium borohydride	16940-66-2	dermal	≥4,000 mg _i /kg
sodium borohydride	16940-66-2	inhalation: dust/mist	>1.295 mg _i /4h

Skin corrosion/irritation

Causes mild skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

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.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
sodium bisulfite		3	

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Suspected of damaging the unborn child (if exposed).

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs (kidney, liver) through prolonged or repeated exposure.

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Hazard category	Target organ	Exposure route
2	kidney	if exposed
2	liver	if exposed

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

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.

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SECTION 14: Transport information

14.1 UN number	not subject to transport regulations
14.2 UN proper shipping name	not relevant
14.3 Transport hazard class(es)	none
14.4 Packing group	not assigned
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

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

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

Not subject to ICAO-IATA.

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

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- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings		
Name of substance	Remarks	Effective date
methanol		1986-12-31
ethylene glycol		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	Remarks	Statutory code	Final RQ pounds (Kg)
methanol		3 4	5000 (2270)
ethylene glycol		3	5000 (2270)
sodium bisulfite		1	5000 (2270)

Legend

- 1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act
- 3 "3" indicates that the source is section 112 of the Clean Air Act
- 4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

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
methanol		TE F3
sodium borohydride		R1
ethylene glycol		
sodium bisulfite		CO

Legend

- CO Corrosive
- F3 Flammable - Third Degree
- R1 Reactive - First Degree
- TE Teratogenic

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

Proposition 65 List of chemicals		
Name acc. to inventory	Remarks	Type of the toxicity
methanol		developmental
ethylene glycol (ethanediol)		developmental

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.	not all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not 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 (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

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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
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
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®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
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)
DNEL	Derived No-Effect Level
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer

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Abbr.	Descriptions of used abbreviations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	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
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
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
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
Water-react.	Material which, in contact with water, emits flammable gases

Key literature references and sources for data

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

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).

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List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H311	Toxic in contact with skin.
H313	May be harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H316	Causes mild skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H333	May be harmful if inhaled.
H360F	May damage fertility (if exposed).
H361d	Suspected of damaging the unborn child (if exposed).
H370	Causes damage to organs.
H373	May cause damage to organs (kidney, liver) through prolonged or repeated exposure.
H402	Harmful to aquatic life.
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.