

| | n number: 12.0 lentifier: V2055SS | | | Revision: 2023-11-08 |
|------|--|--------------|--------------------------|-----------------------|
| SECT | TION 1: Identification | | | |
| 1.1 | Product identifier | | | |
| | SDS Identifier | V2055SS | | |
| | Catalog numbers | K-2055 | | |
| 1.2 | Relevant identified uses of the substance or mixt | ure and uses | advised against | |
| | Relevant identified uses | Component | s 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@aqu | aphoenixsci.com (Steph | ien Craig) |
| 1.4 | Emergency telephone number | | | |
| | Emergency information service | ChemTel In | c.: 1-800-255-3924, +01- | 813-248-0585 |
| SECT | TION 2: Hazard(s) identification | | | |
| 2.1 | Classification of the substance or mixture | | | |
| | Classification acc. to GHS | | | |
| | Hazard class | Category | Hazard class and cat- | Hazard state- ment |

| Hazard class | Category | Hazard class and cat- egory | Hazard state- ment |
|---|----------|--------------------------------|-----------------------|
| substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| acute toxicity (dermal) | 5 | Acute Tox. 5 | H313 |
| skin corrosion/irritation | 1 | Skin Corr. 1 | H314 |
| serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| hazardous to the aquatic environment - acute hazard | 3 | Aquatic Acute 3 | H402 |
| hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

For full text of abbreviations: see SECTION 16.



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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. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labeling

- Signal word danger
- Pictograms

GHS05

•

- Hazard statements

| H290 | May be corrosive to metals. |
|------|--|
| H313 | May be harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H412 | Harmful to aquatic life with long lasting effects. |

- Precautionary statements

| i i ceducionary statem | |
|------------------------|---|
| P234 | Keep only in original packaging. |
| P260 | Do not breathe dusts or mists. |
| P264+P265 | Wash hands thoroughly after handling. Do not touch eyes. |
| P273 | Avoid release to the environment. |
| P280 | Wear eye protection/face protection. |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P302+P317 | IF ON SKIN: Get medical help. |
| 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. |
| P390 | Absorb spillage to prevent material damage. |
| P405 | Store locked up. |
| P406 | Store in a corrosion resistant container with a resistant inner liner. |
| P501 | Dispose of contents/container to industrial combustion plant. |

- Hazardous ingredients for labelling

mercuric nitrate



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2.3 Other hazards

Results of PBT and vPvB assessment

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

Endocrine disrupting properties

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

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 |
|-------------------|---------------------|-------|--|------------|
| deionized water | CAS No 7732-18-5 | ≥96.6 | | |
| mercuric nitrate | CAS No 7783-34-8 | ≤2.4 | Acute Tox. 2 / H300 Acute Tox. 2 / H310 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | |
| nitric acid | CAS No 7697-37-2 | ≤1 | Ox. Liq. 3 / H272 Met. Corr. 1 / H290 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 | |

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.



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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

Substance or mixture corrosive to metals.

Hazardous combustion products

Nitrogen oxides (NOx)

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. If substance has entered a water course or sewer, inform the responsible authority.

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. Breaking the ampoule tip in air when a valve assembly is not attached 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.

- Handling of incompatible substances or mixtures

Do not mix with alkali.

- 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.



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7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

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

| Occup | Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | |
|--------------|--|-----------|-----------------|--------------|----------------|---------------|-----------------|--------------------------|-------------------------|
| Coun- try | Name of agent | CAS No | Identi- fier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Ceiling-C [mg/m³] | Source |
| US | nitric acid | 7697-37-2 | PEL (CA) | 2 | 5 | 4 | 10 | | Cal/ OSHA PEL |
| US | nitric acid | 7697-37-2 | REL | 2 (10 h) | 5 (10 h) | 4 | 10 | | NIOSH REL |
| US | nitric acid | 7697-37-2 | TLV® | 2 | | 4 | | | ACGIH® 2023 |
| US | nitric acid | 7697-37-2 | PEL | 2 | 5 | | | | 29 CFR 1910.100 0 |

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 timeweighted average (unless otherwise specified

8.2 Exposure controls

Appropriate engineering controls

General ventilation.



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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 Titret[™] ampoule is a 13 mm glass ampoule containing approximately 1.1 mL of liquid reagent sealed under vacuum.

| Physical state | liquid |
|--|-----------------|
| Color | colorless |
| Odor | odorless |
| Melting point/freezing point | 0 °C |
| Boiling point or initial boiling point and boiling range | 110 °C |
| Evaporation rate | not determined |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |



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| Auto-ignition temperature | not determined |
|---------------------------|----------------------------|
| Decomposition temperature | not relevant |
| pH (value) | <1 (acid) |
| Kinematic viscosity | not determined |
| Solubility(ies) | |
| Water solubility | miscible in any proportion |

Partition coefficient

| Partition coefficient n-octanol/water (log value) | this information is not available |
|---|-----------------------------------|
|---|-----------------------------------|

| Vapor pressure 23.7 mmHg at 25 °C |
|-----------------------------------|
|-----------------------------------|

Density and/or relative density

| Density | not determined |
|-------------------------|---|
| Relative vapour density | information on this property is not available |
| Relative density | 1.03 (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". Substance or mixture corrosive to metals.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.



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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

Information on toxicological effects 11.1

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

May be harmful in contact with skin.

- Acute toxicity estimate (ATE) Dermal

3,125 ^{mg}/kg

Acute toxicity estimate (ATE) of components

| Name of substance | CAS No | Exposure route | ΑΤΕ |
|-------------------|-----------|-------------------|--|
| mercuric nitrate | 7783-34-8 | dermal | 75 ^{mg} / _{kg} |
| nitric acid | 7697-37-2 | inhalation: vapor | >2.65 ^{mg} / _l /4h |

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.

United States: en



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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 | | | | |
| mercuric nitrate 3 | | | | |

L<u>egend</u> 3

Not classifiable as to carcinogenicity in humans

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.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|-------------------|-----------|----------|-----------------------------------|----------------|------------------|
| mercuric nitrate | 7783-34-8 | LC50 | 0.17 ^{mg} / _l | fathead minnow | 48 h |

12.2 Persistence and degradability

Data are not available.



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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 $\ge 0.1\%$.

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.

| SECT | ION 14: Transport information | |
|------|--|---|
| 14.1 | UN number | |
| | DOT | UN 3264 |
| | IMDG-Code | UN 3264 |
| | ICAO-TI | UN 3264 |
| 14.2 | UN proper shipping name | |
| | DOT | Corrosive liquid, acidic, inorganic, n.o.s. |
| | IMDG-Code | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| | ICAO-TI | Corrosive liquid, acidic, inorganic, n.o.s. |
| | Technical name (hazardous ingredients) | nitric acid, mercuric nitrate |
| 14.3 | Transport hazard class(es) | |
| | DOT | 8 |
| | IMDG-Code | 8 |
| | ICAO-TI | 8 |
| | | |



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|------|-------------------------------------|--|
| 14.4 | Packing group | |
| | DOT | III |
| | IMDG-Code | III |
| | ICAO-TI | III |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the danger- ous 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 | UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (contains: nitric acid, mercuric nitrate), 8, III |
|---|---|
| Reportable quantity (RQ) | 100,002 lbs (45,401 kg) (nitric acid) |
| Danger label(s) | 8 |
| | |
| Special provisions (SP) | IB3, T7, TP1, TP28 |
| ERG No | 154 |
| International Maritime Dangerous Goods Code (IN | /IDG) - Additional information |
| Marine pollutant | - |
| Danger label(s) | 8 |
| | |
| Special provisions (SP) | 223, 274 |
| Excepted quantities (EQ) | E1 |



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|------|---|---------------------|-------------------------|----------------------|--|
| | Limited quantities (LQ) | 5 L | | | |
| | EmS | F-A, S-B | | | |
| | Stowage category | А | | | |
| | Segregation group | 1 - Acids | | | |
| | International Civil Aviation Organization (| ICAO-IATA/DGR) - | Additional information | on | |
| | Danger label(s) | 8 | | | |
| | | | | | |
| | Special provisions (SP) | A3 | | | |
| | Excepted quantities (EQ) | E1 | | | |
| | Limited quantities (LQ) | 1 L | | | |
| SECT | ION 15: Regulatory information | | | | |
| 15.1 | Safety, health and environmental regulati | ons specific for th | e product in questior | ı | |
| | National regulations (United States) | | | | |
| | Toxic Substance Control Act (TSCA) | not all ing | redients are listed (AC | TIVE) | |
| | Superfund Amendment and Reauthorization Act (SARA TITLE III) | | | | |
| | - The List of Extremely Hazardous Substances 302, 304) | and Their Thresho | old Planning Quantities | s (EPCRA Section | |
| | The List of Extremely Hazardous Substances | and Their Thresho | old Planning Quantities | 5 | |
| | Namo of substance | Notos | Poportable quantity | Throshold planning | |

| Name of substance | Notes | Reportable quantity (pounds) | Threshold planning quantity (pounds) |
|-------------------|-------|---------------------------------|---|
| nitric acid | | 1,000 | 1000 |

- Specific Toxic Chemical Listings (EPCRA Section 313)

| Toxics Release Inventory: Specific Toxic Chemical Listings | | | | |
|--|--|------------|--|--|
| Name of substance Remarks Effective date | | | | |
| nitric acid | | 1986-12-31 | | |
| mercuric nitrate 1986-12-31 | | | | |



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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) |
|-------------------|---------|----------------|----------------------|
| nitric acid | | 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 | Type of registration | Basis for listing | Threshold quantity (lbs) |
|-------------------|----------------------|-------------------|-----------------------------|
| nitric acid | Toxic substance | b | 15000 |

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 | Remarks | Classifications |
|-------------------|---------|-----------------|
| nitric acid | | CO R2 |

Legend

CO Corrosive

R2 Reactive - Second Degree

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 |
| mercury compounds | | developmental |

National inventories



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



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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 Sub- stances (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-presenta-tions/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) |
| 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 |
| IARC | International Agency for Research on Cancer |
| 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 |



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| Abbr. | Descriptions of used abbreviations |
|-------------|--|
| IMDG-Code | International Maritime Dangerous Goods Code |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| Met. Corr. | Substance or mixture corrosive to metals |
| 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) |
| Ox. Liq. | Oxidizing liquid |
| PBT | Persistent, Bioaccumulative and Toxic |
| PEL | Permissible exposure limit |
| 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").

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 |
|------|-------------------------------|
| H272 | May intensify fire; oxidizer. |
| H290 | May be corrosive to metals. |
| H300 | Fatal if swallowed. |



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| Code | Text |
|------|---|
| H310 | Fatal in contact with skin. |
| H313 | May be harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H400 | Very toxic to aquatic life. |
| H402 | Harmful to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| 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.