

Multi Acid / Surfactant Formulation

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|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 14.04.2025 |
| 2.1 | 18.06.2025 | 11506929-00003 | Date of first issue: 06.02.2025 |

SECTION 1. IDENTIFICATION

Product identifier : Multi Acid / Surfactant Formulation

Product code : PROQUATIC PONDACID, Complex Organic Acid Solution (Bulk)

Manufacturer or supplier's details

Company : MSD

Address : Rua Coronel Bento Soares, 530
Cruzeiro - Sao Paulo - Brazil CEP 12730-340

Telephone : 908-740-4000

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification in accordance with ABNT NBR 14725 Standard**

Acute toxicity (Oral) : Category 5

Skin corrosion : Sub-category 1B

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3

Short-term (acute) aquatic hazard : Category 3

GHS label elements in accordance with ABNT NBR 14725 Standard

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H303 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

Precautionary Statements

: **Prevention:**

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth.

Do NOT induce vomiting. Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 + P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER/ doctor.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Classification | Concentration (% w/w) |
|---|------------|--|-----------------------|
| D-Glucopyranose, Oligomeric, C8-10 Glycosides | 68515-73-1 | Acute Tox. (Dermal), 5 Eye Dam., 1 Aquatic Acute, 3 | >= 25 -< 30 |
| Citric acid | 77-92-9 | Eye Irrit., 2A STOT SE, 3 | >= 20 -< 30 |
| Phosphoric acid | 7664-38-2 | Met. Corr., 1 Acute Tox. (Oral), 4 Skin Corr., 1B Eye Dam., 1 | >= 10 -< 20 |
| Acetic acid | 64-19-7 | Flam. Liq., 3 Acute Tox. (Oral), 5 Skin Corr., 1A | >= 5 -< 10 |

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|-------------|---------|---|-----------------|
| | | Eye Dam., 1 | |
| Formic acid | 64-18-6 | Flam. Liq., 3 Met. Corr., 1 Acute Tox. (Oral), 4 Acute Tox. (Inhalation), 3 Skin Corr., 1A Eye Dam., 1 | $\geq 5 - < 10$ |

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
 If not breathing, give artificial respiration.
 If breathing is difficult, give oxygen.
 Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
 Get medical attention immediately.
 Wash clothing before reuse.
 Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
 If easy to do, remove contact lens, if worn.
 Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
 If vomiting occurs have person lean forward.
 Call a physician or poison control center immediately.
 Rinse mouth thoroughly with water.
 Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Causes digestive tract burns.
 May be harmful if swallowed.
 Causes serious eye damage.
 May cause respiratory irritation.
 Causes severe burns.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing : None known.

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media

- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Oxides of phosphorus
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

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- Advice on safe handling : Do not get on skin or clothing.
Avoid breathing mist or vapors.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Already sensitized individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitizers.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Explosives

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|-----------------|--|----------------------------------|--|--------|
| Phosphoric acid | 7664-38-2 | TWA | 1 mg/m ³ | ACGIH |
| | | STEL | 3 mg/m ³ | ACGIH |
| Acetic acid | 64-19-7 | LT | 8 ppm 20 mg/m ³ | BR OEL |
| | Further information: Degree of harmfulness: medium | | | |
| | | TWA | 10 ppm | ACGIH |
| | | STEL | 15 ppm | ACGIH |
| Formic acid | 64-18-6 | LT | 4 ppm 7 mg/m ³ | BR OEL |
| | Further information: Degree of harmfulness: medium | | | |
| | | TWA | 5 ppm | ACGIH |

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Engineering measures : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
Minimize open handling.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates, acidic, inorganic gas/vapor and organic vapor type

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Eye protection : Wear safety glasses with side shields or goggles.
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
Use appropriate degowning techniques to remove potentially contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Color : yellow

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : No data available

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|--|---|--|
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Flammability (liquids) | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | No data available |
| Relative density | : | No data available |
| Density | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight | : | No data available |
| Particle characteristics | | |
| Particle size | : | Not applicable |

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------------------------------|---|--|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | Can react with strong oxidizing agents. |
| Conditions to avoid | : | None known. |
| Incompatible materials | : | Oxidizing agents |
| Hazardous decomposition products | : | No hazardous decomposition products are known. |

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

May be harmful if swallowed.

Product:

| | |
|---------------------------|--|
| Acute oral toxicity | : Acute toxicity estimate: 3.691 mg/kg Method: Calculation method |
| Acute inhalation toxicity | : Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method |
| Acute dermal toxicity | : Acute toxicity estimate: > 5.000 mg/kg Method: Calculation method |

Components:**D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

| | |
|-----------------------|---|
| Acute oral toxicity | : LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 401 Remarks: The test was conducted equivalent or similar to guideline |
| Acute dermal toxicity | : LD50 (Rabbit): > 2.000 mg/kg Method: OECD Test Guideline 402 Remarks: The test was conducted equivalent or similar to guideline |

Citric acid:

| | |
|-----------------------|---|
| Acute oral toxicity | : LD50 (Mouse): 5.400 mg/kg |
| Acute dermal toxicity | : LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity |

Phosphoric acid:

| | |
|---------------------------|--|
| Acute oral toxicity | : LD50 (Rat): 2.000 mg/kg Method: OECD Test Guideline 423 |
| Acute inhalation toxicity | : Assessment: Corrosive to the respiratory tract. |

Acetic acid:

| | |
|---------------------|--|
| Acute oral toxicity | : LD50 (Rat): > 2.000 - 5.000 mg/kg Remarks: Based on data from similar materials |
|---------------------|--|

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Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Remarks: Based on data from similar materials

Formic acid:

Acute oral toxicity : Acute toxicity estimate (Humans): 500 mg/kg
Method: Expert judgment

Acute inhalation toxicity : LC50 (Rat): 7,4 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes severe burns.

Components:**D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : The test was conducted according to guideline

Citric acid:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Phosphoric acid:

Result : Corrosive after 3 minutes to 1 hour of exposure
Remarks : Based on national or regional regulation.

Acetic acid:

Species : Rabbit
Result : Corrosive after 3 minutes or less of exposure

Formic acid:

Result : Corrosive after 3 minutes or less of exposure
Remarks : Based on extreme pH

Serious eye damage/eye irritation

Causes serious eye damage.

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Components:**D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

| | | |
|---------|---|---|
| Species | : | Rabbit |
| Result | : | Irreversible effects on the eye |
| Method | : | OECD Test Guideline 405 |
| Remarks | : | The test was conducted equivalent or similar to guideline |

Citric acid:

| | | |
|---------|---|--|
| Species | : | Rabbit |
| Result | : | Irritation to eyes, reversing within 21 days |
| Method | : | OECD Test Guideline 405 |

Phosphoric acid:

| | | |
|---------|---|---------------------------------|
| Species | : | Rabbit |
| Result | : | Irreversible effects on the eye |

Acetic acid:

| | | |
|---------|---|---------------------------------|
| Species | : | Rabbit |
| Result | : | Irreversible effects on the eye |

Formic acid:

| | | |
|---------|---|---------------------------------|
| Result | : | Irreversible effects on the eye |
| Remarks | : | Based on skin corrosivity. |

Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:**D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

| | | |
|--------------------|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Routes of exposure | : | Skin contact |
| Species | : | Mouse |
| Method | : | OECD Test Guideline 429 |
| Result | : | negative |
| Remarks | : | The test was conducted equivalent or similar to guideline |

Formic acid:

| | | |
|--------------------|---|-------------------------|
| Test Type | : | Buehler Test |
| Routes of exposure | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

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Germ cell mutagenicity

Not classified based on available information.

Components:**D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: The test was conducted according to guideline

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: The test was conducted equivalent or similar to guideline

Citric acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: in vitro micronucleus test
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative

Phosphoric acid:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Acetic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

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Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: equivocal
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Formic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in *Drosophila melanogaster* (in vivo)
Application Route: Ingestion
Method: OECD Test Guideline 477
Result: negative

Carcinogenicity

Not classified based on available information.

Components:**Acetic acid:**

Species : Mouse
Application Route : Skin contact
Exposure time : 32 weeks
Result : negative

Formic acid:

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative
Remarks : Based on data from similar materials

Reproductive toxicity

Not classified based on available information.

Components:**Citric acid:**

Effects on fetal development : Test Type: One-generation reproduction toxicity study
Species: Rat

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Application Route: Ingestion

Result: negative

Phosphoric acid:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Acetic acid:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

Formic acid:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

May cause respiratory irritation.

Components:**Citric acid:**

Assessment : May cause respiratory irritation.

STOT-repeated exposure

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Repeated dose toxicity**Components:****Citric acid:**

| | |
|-------------------|---------------|
| Species | : Rat |
| NOAEL | : 4.000 mg/kg |
| LOAEL | : 8.000 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 10 Days |

Phosphoric acid:

| | |
|-------------------|---------------------------|
| Species | : Rat |
| NOAEL | : 250 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 40 - 52 Days |
| Method | : OECD Test Guideline 422 |

Acetic acid:

| | |
|-------------------|-------------|
| Species | : Rat |
| NOAEL | : 290 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 8 Weeks |

Formic acid:

| | |
|-------------------|--|
| Species | : Rat |
| NOAEL | : 400 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 52 Weeks |
| Remarks | : Based on data from similar materials |

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

| | |
|------------------|---|
| Toxicity to fish | : LC50 (Danio rerio (zebra fish)): 100,81 mg/l Exposure time: 96 h Method: ISO 7346/2 Remarks: The test was conducted according to guideline |
|------------------|---|

| | |
|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: The test was conducted according to guideline |
|---|---|

| | |
|---------------------------|---|
| Toxicity to algae/aquatic | : EC10 (Desmodesmus subspicatus (green algae)): 6,25 mg/l |
|---------------------------|---|

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Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d

Toxicity to microorganisms : NOEC (Pseudomonas putida): 1.150 mg/l
Exposure time: 16 h

Formic acid:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 130 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 365 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1.240 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): 295 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : NOEC: 72 mg/l
Exposure time: 13 d

Persistence and degradability**Components:****D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
Remarks: The test was conducted according to guideline

Citric acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 97 %
Exposure time: 28 d

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Method: OECD Test Guideline 301B

Acetic acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 20 d

Formic acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Bioaccumulative potential**Components:****D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

Partition coefficient: n-octanol/water : log Pow: < 4
Remarks: Expert judgment

Citric acid:

Partition coefficient: n-octanol/water : log Pow: -1,72

Acetic acid:

Partition coefficient: n-octanol/water : log Pow: -0,17

Formic acid:

Partition coefficient: n-octanol/water : log Pow: -2,1

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Do not dispose of waste into sewer.
Dispose of in accordance with local regulations.
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION**International Regulations**

UNRTDG

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| | | | |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 14.04.2025 |
| 2.1 | 18.06.2025 | 11506929-00003 | Date of first issue: 06.02.2025 |

UN number : UN 1760
Proper shipping name : CORROSIVE LIQUID, N.O.S.
(Phosphoric acid, Formic acid)
Class : 8
Packing group : III
Labels : 8
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 1760
Proper shipping name : Corrosive liquid, n.o.s.
(Phosphoric acid, Formic acid)
Class : 8
Packing group : III
Labels : Corrosive
Packing instruction (cargo aircraft) : 856
Packing instruction (passenger aircraft) : 852

IMDG-Code

UN number : UN 1760
Proper shipping name : CORROSIVE LIQUID, N.O.S.
(Phosphoric acid, Formic acid)
Class : 8
Packing group : III
Labels : 8
EmS Code : F-A, S-B
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**ANTT**

UN number : UN 1760
Proper shipping name : CORROSIVE LIQUID, N.O.S.
(Phosphoric acid, Formic acid)
Class : 8
Packing group : III
Labels : 8
Hazard Identification Number : 80

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

National List of Carcinogenic Agents for Humans - (LINACH) : Not applicable

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Brazil. List of chemicals controlled by the Federal Police : Phosphoric acid

The ingredients of this product are reported in the following inventories:

| | |
|-------|------------------|
| AICS | : not determined |
| DSL | : not determined |
| IECSC | : not determined |

SECTION 16. OTHER INFORMATION

| | |
|---------------|--------------|
| Revision Date | : 18.06.2025 |
| Date format | : dd.mm.yyyy |

Further information

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Full text of other abbreviations

| | |
|--------------|---|
| ACGIH | : USA. ACGIH Threshold Limit Values (TLV) |
| BR OEL | : Brazil. NR 15 - Unhealthy activities and operations |
| ACGIH / TWA | : 8-hour, time-weighted average |
| ACGIH / STEL | : Short-term exposure limit |
| BR OEL / LT | : Up to 48 hours /week |

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation,

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Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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