

SAFETY DATA SHEET

according to the Globally Harmonized System



FOLIAR EXTRA

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2025
1.6	16.04.2025	50001163	Date of first issue: 30.08.2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : FOLIAR EXTRA

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 Walnut Street
Philadelphia PA 19104
USA

Telephone : 1 215 / 299-6000 (Corporate of

E-mail address : SDS-Info@fmc.com

Emergency telephone number : 1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical Emergency Number : All other countries: +1 651 / 632-6793 (Collect)

Recommended use of the chemical and restrictions on use

Recommended use : Crop nutrition

Restrictions on use : Use as recommended by the label.

2. HAZARDS IDENTIFICATION

GHS Classification

Serious eye damage/eye irritation : Category 2A

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

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P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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

P337 + P317 If eye irritation persists: Get medical help.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
potassium dihydrogenorthophosphate	7778-77-0	$\geq 1 - < 10$
magnesium nitrate	10377-60-3	$\geq 1 - < 10$
phosphoric acid	7664-38-2	$\geq 2.5 - < 3$
Citric acid, monohydrate	5949-29-1	$\geq 1 - < 10$
trisodium nitrilotriacetate	5064-31-3	$\geq 1 - < 2.5$

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

In case of skin contact : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off immediately with plenty of water for at least 15 minutes.
Wash contaminated clothing before re-use.
Get medical attention if irritation develops and persists.

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- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Causes serious eye irritation.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.
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5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.
High volume water jet
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Ammonia
Fire may produce irritating, corrosive and/or toxic gases.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.
- Special protective equipment : Firefighters should wear protective clothing and self-contained

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for firefighters

breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
If it can be safely done, stop the leak.
Do not touch or walk through the spilled material.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.
For disposal considerations see section 13.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Neutralize with chalk, alkali solution or ammonia.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Keep away from combustible material.
- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Do not store near acids.

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Further information on storage stability : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components 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
manganese dinitrate	10377-66-9	TWA (Inhalable particulate matter)	0.1 mg/m ³ (Manganese)	ACGIH
		TWA (Respirable particulate matter)	0.02 mg/m ³ (Manganese)	ACGIH

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Ensure that eye flushing systems and safety showers are located close to the working place.
Wear suitable protective equipment.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Form	:	liquid
Colour	:	brown
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	1.50 - 2.50 Concentration: 100 %
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.21 - 1.22
Density	:	No data available
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available

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Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	Non-oxidizing

10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures Avoid formation of aerosol.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers
Hazardous decomposition products	:	irritating gases

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

potassium dihydrogenorthophosphate:

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Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC0 (Rat, male and female): > 0.83 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402

magnesium nitrate:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402

phosphoric acid:

Acute oral toxicity : LD50 (Rat, female): 2,600 mg/kg
Method: OECD Test Guideline 423

Citric acid, monohydrate:

Acute oral toxicity : LD50 Oral (Mouse, male and female): 5,400 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

trisodium nitrilotriacetate:

Acute oral toxicity : LD50 (Rat, female): 1,470 mg/kg

Acute inhalation toxicity : LC0 (Rat, male): 2.307 mg/l
Exposure time: 4 d
Test atmosphere: dust/mist
Remarks: no mortality

Acute dermal toxicity : LD0 (Rabbit, male and female): 2,000 mg/kg
Remarks: no mortality

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Remarks : Not expected to be irritating to skin.

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Remarks : Extremely corrosive and destructive to tissue.

Components:

potassium dihydrogenorthophosphate:

Species : Rabbit
Exposure time : 4 h
Result : No skin irritation

magnesium nitrate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Based on data from similar materials

phosphoric acid:

Species : Rabbit
Assessment : Corrosive
Result : Corrosive after 3 minutes to 1 hour of exposure

Citric acid, monohydrate:

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

trisodium nitrilotriacetate:

Species : Rabbit
Method : Draize Test
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Assessment : Irritating to eyes.
Remarks : May cause irreversible eye damage.

Remarks : May cause irreversible eye damage.

Components:

potassium dihydrogenorthophosphate:

Species : Rabbit
Result : No eye irritation

magnesium nitrate:

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Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Eye irritation

phosphoric acid:

Result	:	Irreversible effects on the eye
Remarks	:	Based on skin corrosivity

Citric acid, monohydrate:

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

trisodium nitrilotriacetate:

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

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Remarks	:	Not expected to cause skin sensitisation
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Components:

potassium dihydrogenorthophosphate:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Intradermal
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative

magnesium nitrate:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.

trisodium nitrilotriacetate:

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Test Type	: Buehler Test
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

potassium dihydrogenorthophosphate:

Genotoxicity in vitro	: Test Type: Micronucleus test Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: negative
	Test Type: gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 490 Result: negative

magnesium nitrate:

Genotoxicity in vitro	: Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative
	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials
	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials

Germ cell mutagenicity - Assessment	: In vitro tests did not show mutagenic effects
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phosphoric acid:

Genotoxicity in vitro	: Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative
	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative

Citric acid, monohydrate:

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Genotoxicity in vitro : Test Type: Micronucleus test
Method: OECD Test Guideline 487
Result: positive

Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: chromosome aberration assay
Species: Rat (male)
Application Route: Oral
Method: OECD Test Guideline 475
Result: negative

Test Type: Rodent Dominant Lethal Assay
Species: Rat (male and female)
Application Route: Oral
Method: Regulation (EC) No. 440/2008, Annex, B.22
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

trisodium nitrilotriacetate:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Test Type: Cytogenetic assay
Species: Mouse (male)
Application Route: Oral
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

Citric acid, monohydrate:

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

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trisodium nitrilotriacetate:

Species : Rat, male and female
Application Route : Oral
Exposure time : 104 weeks
Dose : 0, 9, 92, 921 mg/kg/d
 : 9 mg/kg bw/day
LOAEL : 92 mg/kg bw/day
Result : positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:

potassium dihydrogenorthophosphate:

Effects on fertility : Species: Rat, male and female
 : Application Route: Ingestion
 : General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight
 : General Toxicity F1: NOAEL: 1,000 mg/kg body weight
 : Method: OECD Test Guideline 422

magnesium nitrate:

Effects on fertility : Species: Rat, male and female
 : Application Route: Oral
 : Dose: 0, 250, 750, and 1,500 milligram per kilogram
 : Duration of Single Treatment: 28 d
 : General Toxicity - Parent: NOAEL: > 1,500 mg/kg body weight
 : Method: OECD Test Guideline 422
 : Result: negative
 : Remarks: Based on data from similar materials

Effects on foetal development : Species: Rat
 : Application Route: Oral
 : Dose: 0, 250, 750, and 1,500 milligram per kilogram
 : Duration of Single Treatment: 28 d
 : General Toxicity Maternal: NOAEL: > 1,500 mg/kg body weight
 : Developmental Toxicity: NOAEL: > 1,500 mg/kg body weight
 : Method: OECD Test Guideline 422
 : Result: negative
 : Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

phosphoric acid:

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Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Ingestion
General Toxicity - Parent: NOAEL: 500 mg/kg body weight
General Toxicity F1: NOAEL: 500 mg/kg body weight
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Mouse
Application Route: Ingestion
General Toxicity Maternal: NOAEL: 370 mg/kg body weight
Developmental Toxicity: NOAEL: 370 mg/kg body weight
Result: negative
Remarks: Based on data from similar materials

Citric acid, monohydrate:

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Mouse
Application Route: Oral
Dose: 0, 2.41, 11.2, 52.0, 241 mg/k
Duration of Single Treatment: 6 - 15 d
Teratogenicity: NOAEL: > 241 mg/kg body weight

Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
Dose: 0, 2.95, 13.7, 63.6, 295 mg/k
Duration of Single Treatment: 6 - 15 d
Teratogenicity: NOAEL: > 295 mg/kg body weight

Test Type: reproductive and developmental toxicity study
Species: Rabbit
Application Route: Oral
Dose: 0, 4.25, 19.75, 91.70, 425 mg
Duration of Single Treatment: 6 - 15 d
Teratogenicity: NOAEL: > 425 mg/kg body weight

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

trisodium nitrilotriacetate:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 90 and 450 mg/kg bw/day
General Toxicity - Parent: LOAEL: 450 mg/kg body weight
Result: negative

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral

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Dose: 90 and 450 mg/kg bw/day
General Toxicity Maternal: LOAEL: 450 mg/kg bw/day
Developmental Toxicity: NOAEL: 450 mg/kg bw/day
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Based on available data, the classification criteria are not met.

Components:

trisodium nitrilotriacetate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Components:

magnesium nitrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Citric acid, monohydrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

potassium dihydrogenorthophosphate:

Species : Dog, male and female
NOAEL : 322.88 mg/kg
Application Route : Ingestion
Exposure time : 90

magnesium nitrate:

Species : Rat, male and female
NOAEL : > 1,500 mg/kg
Application Route : Oral
Exposure time : 28d
Dose : 0, 250, 750, 1,500 mg/kg/day
Method : OECD Test Guideline 422
Remarks : Based on data from similar materials

phosphoric acid:

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Species : Rat, male and female
NOAEL : 250 mg/kg
Application Route : Oral - gavage
Exposure time : 42 - 54 d
Method : OECD Test Guideline 422

Citric acid, monohydrate:

Species : Rat
NOAEL : 4,000 mg/kg
LOAEL : 8,000 mg/kg
Application Route : Oral
Exposure time : 10d
Dose : 2, 4, 8, 16 g/kg bw/day

Species : Mouse
NOAEL : 1,000 mg/kg
LOAEL : 2,000 mg/kg
Application Route : Oral
Exposure time : 10d
Dose : 1, 2, 4, 8 g/kg bw/day

trisodium nitrilotriacetate:

Species : Rat, male
NOAEL : 9 mg/kg bw/day
Application Route : Oral - feed
Exposure time : 28 d
Dose : 0, 9 mg/kg ppm

Species : Rat, male and female
LOAEC : 0.342 mg/l
Application Route : Inhalation
Test atmosphere : dust/mist
Exposure time : 28 d
Dose : 0.0102, 0.2131, 0.3422 mg/l

Species : Rabbit
NOAEL : 50 mg/kg bw/day
Application Route : Dermal
Exposure time : 28 or 91 d
Dose : 0, 50 mg/kg

Aspiration toxicity

Based on available data, the classification criteria are not met.

Further information

Product:

Remarks : No data available

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

potassium dihydrogenorthophosphate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

NOEC (Oncorhynchus mykiss (rainbow trout)): 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

NOEC (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): 1,000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

magnesium nitrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LC50 (Poecilia reticulata (guppy)): 1,378 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

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Remarks: Based on data from similar materials

LC50 (Cyprinus carpio (Carp)): 95 - 102 mg/l

Exposure time: 48 h

Test Type: semi-static test

Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (diatoms): > 1,700 mg/l
Exposure time: 10 d
Test Type: static test
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: 58 mg/l
Exposure time: 30 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test
Remarks: Based on data from similar materials

NOEC: 157 mg/l

Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

Test Type: flow-through test

Remarks: Based on data from similar materials

phosphoric acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 3 - 3.25 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

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Citric acid, monohydrate:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 440 mg/l Test Type: static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,535 mg/l Exposure time: 24 h Test Type: static test
Toxicity to algae/aquatic plants	:	NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l Exposure time: 8 d Test Type: static test
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): > 10,000 mg/l Exposure time: 16 h Test Type: Cell multiplication inhibition test NOEC (Protozoa): 325 mg/l Exposure time: 72 h
Toxicity to terrestrial organisms	:	NOEC: > 4 mg/kg Exposure time: 14 d Species: Birds LD50: > 4 mg/kg Exposure time: 14 d Species: Birds

trisodium nitrilotriacetate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 114 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Gammarus fasciatus (freshwater shrimp)): 98 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 91.5 mg/l Exposure time: 72 h Method: EU Method C3 NOEC (Desmodesmus subspicatus (green algae)): 1.43 mg/l Exposure time: 72 h Method: EU Method C3
Toxicity to microorganisms	:	(Protozoa): > 400 mg/l Exposure time: 48 h Test Type: Growth inhibition
Toxicity to fish (Chronic tox-	:	NOEC: 54 mg/l

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Exposure time: 229 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 9.3 mg/l
Exposure time: 147 d
Species: Gammarus fasciatus (freshwater shrimp)
Test Type: flow-through test

Persistence and degradability

Components:

phosphoric acid:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Citric acid, monohydrate:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301B

Result: Readily biodegradable.
Method: OECD Test Guideline 301E

Result: Inherently biodegradable.
Method: OECD Test Guideline 302B

trisodium nitrilotriacetate:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 14 d
Method: OECD Test Guideline 301E

Bioaccumulative potential

Components:

Citric acid, monohydrate:

Bioaccumulation : Bioconcentration factor (BCF): 3.2
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: -1.55

trisodium nitrilotriacetate:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: -13.2 (25 °C)
Method: QSAR

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Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

Components:

phosphoric acid:

Additional ecological information : Harmful effects on aquatic organisms also due to pH shift.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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Special precautions for user

Not applicable

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

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

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

16. OTHER INFORMATION

Revision Date	: 16.04.2025
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Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit

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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, 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

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