

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name FOLIAR EXTRA PAKISTAN

Other means of identification

Product code 50001179

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

Use of the Sub- : A fertilizer with micronutrients for use in agriculture
stance/Mixture

Recommended restrictions : Use as recommended by the label.
on use

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Agro Limited
Rectors Lane, Pentre
Flintshire
CH5 2DH
United Kingdom

Telephone: + 44 1244 537370
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
England and Wales: 44-870-8200418 (CHEMTREC)

Medical emergency:
England and Wales: 111
Scotland: 84 54 24 2424

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK
SI 2019/720, and UK SI 2020/1567)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :



Signal word : Danger

Hazard statements :
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :
Prevention:
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
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.
Disposal:
P501 Dispose of contents/container as hazardous waste in accordance with local regulations.

Hazardous components which must be listed on the label:

phosphoric acid
potassium hydroxide
trisodium nitrilotriacetate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version 1.1 Revision Date: 19.02.2024 SDS Number: 50001179 Date of last issue: 05.05.2021
Date of first issue: 05.05.2021

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
phosphoric acid	7664-38-2 231-633-2 015-011-00-6	Skin Corr. 1B; H314 specific concentra- tion limit Skin Corr. 1B; H314 ≥ 25 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 %	≥ 10 - < 20
potassium hydroxide	1310-58-3 215-181-3 019-002-00-8	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 specific concentra- tion limit Skin Corr. 1A; H314 ≥ 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0.5 - < 2 % Eye Irrit. 2; H319 0.5 - < 2 %	≥ 3 - < 5
trisodium nitrilotriacetate	5064-31-3 225-768-6 607-620-00-6	Acute Tox. 4; H302 Eye Irrit. 2; H319 Carc. 2; H351 specific concentra- tion limit Carc. 2; H351 ≥ 5 %	≥ 1 - < 5
Citric acid, monohydrate	5949-29-1	Eye Irrit. 2; H319	≥ 1 - < 10

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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. |
| 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. |
| If inhaled | : Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician. |
| In case of skin contact | : Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.
Wash off immediately with plenty of water for at least 15 minutes.
Get medical attention if irritation develops and persists. |
| In case of eye contact | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
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 | : Clean mouth with water and drink afterwards plenty of water.
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. |

4.2 Most important symptoms and effects, both acute and delayed

- | | |
|-------|--|
| Risks | : Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage. |
|-------|--|

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

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.
Carbon oxides
Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Further information : 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
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.

6.2 Environmental precautions

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for 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).

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

Advice on protection against fire and explosion : Keep away from combustible material.

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

Advice on common storage : Do not store near acids.

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

7.3 Specific end use(s)

Specific use(s) : Fertilizers

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version 1.1 Revision Date: 19.02.2024 SDS Number: 50001179 Date of last issue: 05.05.2021
Date of first issue: 05.05.2021

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
phosphoric acid	7664-38-2	TWA	1 mg/m ³	GB EH40
		STEL	2 mg/m ³	GB EH40
		TWA	1 mg/m ³	2000/39/EC
	Further information: Indicative			
		STEL	2 mg/m ³	2000/39/EC
	Further information: Indicative			
potassium hydroxide	1310-58-3	STEL	2 mg/m ³	GB EH40
manganese dinitrate	10377-66-9	TWA (Inhalable)	0.2 mg/m ³ (Manganese)	GB EH40
		TWA (Respirable fraction)	0.05 mg/m ³ (Manganese)	GB EH40
		TWA (inhalable fraction)	0.2 mg/m ³ (Manganese)	2017/164/EU
	Further information: Indicative			
		TWA (Respirable fraction)	0.05 mg/m ³ (Manganese)	2017/164/EU
	Further information: Indicative			
copper(II) oxide	1317-38-0	TWA (Dusts and mists)	1 mg/m ³ (Copper)	GB EH40
		STEL (Dusts and mists)	2 mg/m ³ (Copper)	GB EH40

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
trisodium nitrilotriacetate	Workers	Inhalation	Long-term systemic effects	3.2 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	0.8 mg/m ³
	Consumers	Oral	Long-term systemic effects	0.3 mg/kg bw/day

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
trisodium nitrilotriacetate	Fresh water	0.93 mg/l
	Marine water	0.093 mg/l

8.2 Exposure controls

Personal protective equipment

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version 1.1	Revision Date: 19.02.2024	SDS Number: 50001179	Date of last issue: 05.05.2021 Date of first issue: 05.05.2021
----------------	------------------------------	-------------------------	---

problems.

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.

Skin and body protection

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

Respiratory protection

: No personal respiratory protective equipment normally required.

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.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: No data available
Odour	: No data available
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
Upper explosion limit / Upper	: No data available

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version 1.1	Revision Date: 19.02.2024	SDS Number: 50001179	Date of last issue: 05.05.2021 Date of first issue: 05.05.2021
----------------	------------------------------	-------------------------	---

flammability limit

Lower explosion limit / Lower
flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.226 - 1.265

Density : No data available

Bulk density : No data available

Solubility(ies)
Water solubility : soluble

Solubility in other solvents : No data available

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 : No data available

9.2 Other information

Particle size : No data available

Particle Size Distribution : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

10.6 Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : LD50 Oral: > 2,000 mg/kg
Method: Calculation method
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC0: > 20 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method
Remarks: Based on data from similar materials

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

phosphoric acid:

Acute oral toxicity : LD50 (Rat, female): > 300 - < 2,000 mg/kg
Method: OECD Test Guideline 423

potassium hydroxide:

Acute oral toxicity : LD50 (Rat, male): 333 mg/kg

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Remarks: no mortality

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

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

Skin corrosion/irritation

Causes skin irritation.

Product:

Assessment : Irritating to skin.
Result : Severe skin irritation

Components:

phosphoric acid:

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

potassium hydroxide:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 431
Result : Corrosive

trisodium nitrilotriacetate:

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

Citric acid, monohydrate:

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

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Assessment : Risk of serious damage to eyes.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Remarks : Information given is based on data obtained from similar product.

Remarks : May cause irreversible eye damage.

Components:

phosphoric acid:

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

potassium hydroxide:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Corrosive

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

Citric acid, monohydrate:

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

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:

Assessment : Not a skin sensitizer.
Remarks : Based on data from similar materials

Components:

potassium hydroxide:

Test Type : Intracutaneous test
Species : Guinea pig
Result : Not a skin sensitizer.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

trisodium nitrilotriacetate:

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:

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

potassium hydroxide:

Genotoxicity in vitro	: Test Type: Ames test Result: negative
-----------------------	--

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.

Citric acid, monohydrate:

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

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.

Carcinogenicity

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

Components:

trisodium nitrilotriacetate:

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

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Citric acid, monohydrate:

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

Reproductive toxicity

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

Components:

phosphoric acid:

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

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

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
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

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

assessment

ductive 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:

Citric acid, monohydrate:

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

Repeated dose toxicity

Components:

phosphoric acid:

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

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

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

Aspiration toxicity

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

Further information

Product:

Remarks	:	No data available
---------	---	-------------------

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	Remarks: No data is available on the product itself.
------------------	---	--

Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data is available on the product itself.
---	---	--

Toxicity to algae/aquatic plants	:	Remarks: No data is available on the product itself.
----------------------------------	---	--

Toxicity to microorganisms	:	Remarks: No data available
----------------------------	---	----------------------------

Components:

phosphoric acid:

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

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
----------------------------------	---	---

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

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

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 toxicity) : NOEC: 54 mg/l
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

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

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

12.2 Persistence and degradability

Components:

phosphoric acid:

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

trisodium nitrilotriacetate:

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

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

12.3 Bioaccumulative potential

Components:

trisodium nitrilotriacetate:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Citric acid, monohydrate:

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

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

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : 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.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number

ADN	:	UN 1805
ADR	:	UN 1805
RID	:	UN 1805
IMDG	:	UN 1805
IATA	:	UN 1805

14.2 UN proper shipping name

ADN	:	PHOSPHORIC ACID SOLUTION
ADR	:	PHOSPHORIC ACID SOLUTION
RID	:	PHOSPHORIC ACID SOLUTION
IMDG	:	PHOSPHORIC ACID SOLUTION
IATA	:	Phosphoric acid, solution

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	:	8
ADR	:	8
RID	:	8
IMDG	:	8
IATA	:	8

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: C1
Hazard Identification Number	: 80
Labels	: 8
ADR	
Packing group	: III
Classification Code	: C1
Hazard Identification Number	: 80
Labels	: 8
Tunnel restriction code	: (E)
RID	
Packing group	: III

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

Classification Code : C1
Hazard Identification Number : 80
Labels : 8

IMDG

Packing group : III
Labels : 8
EmS Code : F-A, S-B

IATA (Cargo)

Packing instruction (cargo aircraft) : 856
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive

IATA (Passenger)

Packing instruction (passenger aircraft) : 852
Packing instruction (LQ) : Y841
Packing group : III
Labels : Corrosive

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 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.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17) : Conditions of restriction for the following entries should be considered:
Number on list 3

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version 1.1	Revision Date: 19.02.2024	SDS Number: 50001179	Date of last issue: 05.05.2021 Date of first issue: 05.05.2021
----------------	------------------------------	-------------------------	---

boric acid (Number on list 30)
Alcohols, C11-14-iso-, C13-rich,
ethoxylated (Number on list 3)

UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation : Not applicable

The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

UK REACH List of substances subject to authorisation (Annex XIV) : Not applicable

Control of Major Accident Hazards Regulations 2015 (COMAH) P8 OXIDIZING LIQUIDS AND SOLIDS

P8

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 the following components that are not on the Canadian DSL nor NDSL. JETT 200
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

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

SECTION 16: Other information

Full text of H-Statements

H290	: May be corrosive to metals.
H302	: Harmful if swallowed.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H351	: Suspected of causing cancer.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Carc.	: Carcinogenicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Met. Corr.	: Corrosive to metals
Skin Corr.	: Skin corrosion
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU	: Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA	: Limit Value - eight hours
2000/39/EC / STEL	: Short term exposure limit
2017/164/EU / TWA	: Limit Value - eight hours
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	: Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



FOLIAR EXTRA PAKISTAN

Version	Revision Date:	SDS Number:	Date of last issue: 05.05.2021
1.1	19.02.2024	50001179	Date of first issue: 05.05.2021

tative) 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

Further information

Other information :

Classification of the mixture:

Acute Tox. 4	H302
Skin Irrit. 2	H315
Eye Dam. 1	H318
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Calculation method

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to ensure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared by

FMC Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2024 FMC Corporation. All Rights Reserved.

GB / 6N