SAFETY DATA SHEET

GIANT®

Version	Revision Date:	SDS Number:	Date of last issue: -
2.0	24.06.2025	50002953	Date of first issue: 29.04.2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GIANT®

Manufacturer or supplier's details

Company : FMC QUÍMICA DO BRASIL LTDA.

Address : AVENIDA DR. JOSÉ BONIFÁCIO COUTINHO NOGUEIRA 150 - 1º ANDAR - JARDIM MADALENA, CAMPINAS SP BRASIL
TELEFONE: (19) 2042.4500

Emergency telephone : Brazil: 0800 34 35 450 (24 hours)
+55-2139581449 (CHEMTREC)

Medical Emergency Number : 0800 7010 450

Recommended use of the chemical and restrictions on use

Recommended use : Can be used as herbicide only.
Herbicide

Restrictions on use : Use as recommended by the label.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard

Acute toxicity (Oral) : Category 5

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 5

Short-term (acute) aquatic hazard : Category 3

Long-term (chronic) aquatic hazard : Category 1

GHS label elements in accordance with ABNT NBR 14725 Standard

Hazard pictograms :

Signal Word : WARNING

Hazard Statements : H303 + H313 May be harmful if swallowed or in contact with

skin.
H332 Harmful if inhaled.
H402 Harmful to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**

P261 Avoid breathing mist or vapors.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P391 Collect spillage.

Disposal:

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

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)
bixlozone (ISO)	81777-95-9	Acute Tox. (Oral), 5 Acute Tox. (Inhalation), 4 Acute Tox. (Dermal), 5 Aquatic Acute, 1 Aquatic Chronic, 1	>= 30 -< 50
1,2-benzisothiazol-3(2H)-one	2634-33-5	Acute Tox. (Oral), 4 Serious eye damage/eye irritation, 1 Skin Sens., 1 Aquatic Acute, 1 Aquatic Chronic, 2	>= 0,025 -< 0,1

SECTION 4. FIRST AID MEASURES

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

If inhaled	:	Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.
In case of skin contact	:	Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
In case of eye contact	:	Flush eyes with water as a precaution. 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 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	:	May be harmful if swallowed or in contact with skin. Harmful if inhaled.
Protection of first-aiders	:	Avoid inhalation, ingestion and contact with skin and eyes.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	:	Do not spread spilled material with high-pressure water streams.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Fire may produce irritating, corrosive and/or toxic gases. Chlorinated compounds Hydrogen cyanide Nitrogen oxides (NOx) Carbon oxides Hydrogen chloride
Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Use a water spray to cool fully closed containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Use personal protective equipment. If it can be safely done, stop the leak. Do not touch or walk through the spilled material.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Do not inhale aerosol. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
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. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter.
Hand protection		
Material	:	Protective gloves
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
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Form	:	liquid
Color	:	beige
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	7,34 (20 °C) (undiluted)
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	102 - 110 °C Method: closed cup

Evaporation rate	:	No data available
Self-ignition	:	423 °C
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	:	1,1214 (20 °C) Method: OECD Test Guideline 109
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, dynamic	:	103 mPa.s (20 °C) Method: OECD Test Guideline 114 75,5 mPa.s (40 °C) Method: OECD Test Guideline 114
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Surface tension	:	37,2 mN/m, OECD Test Guideline 115 46,71 mN/m, 1 g/l, OECD Test Guideline 115
Molecular weight	:	Not applicable
Metal corrosion rate	:	Not corrosive to metals.
Particle size	:	3,425 µm
Particle Size Distribution	:	D10 = 1,489 µm D50 = 2,932 µm

D90 = 6,002 µm

SECTION 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	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

May be harmful if swallowed or in contact with skin.
Harmful if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 425 Symptoms: Fatality, hypoactivity, Breathing difficulties Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 2,04 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: Breathing difficulties Assessment: The component/mixture is moderately toxic after short term inhalation. Remarks: no mortality
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: The component/mixture is minimally toxic after single contact with skin. Remarks: no mortality

Components:

bixlozone (ISO):

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 425 Symptoms: hypoactivity, Breathing difficulties GLP: yes Assessment: The component/mixture is minimally toxic after single ingestion. Remarks: no mortality Minimal effects that do not meet the threshold for classification.
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 2,11 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: Breathing difficulties GLP: yes Remarks: no mortality
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Symptoms: Irritation GLP: yes Assessment: The component/mixture is minimally toxic after single contact with skin. Remarks: no mortality Minimal effects that do not meet the threshold for classification.

1,2-benzisothiazol-3(2H)-one:

Acute dermal toxicity	:	LD50 (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

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

Product:

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

Components:

bixlozone (ISO):

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	slight or no skin irritation.
GLP	:	yes
Remarks	:	Minimal effects that do not meet the threshold for classification.

1,2-benzisothiazol-3(2H)-one:

Species	:	Rabbit
Exposure time	:	72 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

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

Product:

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

Components:

bixlozone (ISO):

Species	:	Rabbit
Result	:	Slight or no eye irritation
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
GLP	:	yes
Remarks	:	Minimal effects that do not meet the threshold for classification.

1,2-benzisothiazol-3(2H)-one:

Species	:	Bovine cornea
Result	:	No eye irritation
Method	:	OECD Test Guideline 437

Species	:	Rabbit
Result	:	Irreversible effects on the eye
Method	:	EPA OPP 81-4

Respiratory or skin sensitization

Skin sensitization

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

Respiratory sensitization

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

Product:

Test Type	:	Local lymph node assay (LLNA)
Assessment	:	Not a skin sensitizer.
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.
GLP	:	yes

Components:

bixlozone (ISO):

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

1,2-benzisothiazol-3(2H)-one:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	May cause sensitization by skin contact.
Species	:	Guinea pig
Method	:	FIFRA 81.06
Result	:	May cause sensitization by skin contact.

Germ cell mutagenicity

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

Product:

Genotoxicity in vitro	:	Test Type: Ames test Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Rat Method: OECD Test Guideline 474 Result: negative

Components:

bixlozone (ISO):

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 490 Result: negative GLP: yes Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes

Genotoxicity in vivo	:	Test Type: Micronucleus test Cell type: Bone marrow Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity - Assessment	:	Animal testing did not show any mutagenic effects.

1,2-benzisothiazol-3(2H)-one:

Genotoxicity in vitro	:	Test Type: gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: positive
Genotoxicity in vivo	:	Test Type: unscheduled DNA synthesis assay Species: Rat (male) Cell type: Liver cells Application Route: Ingestion Exposure time: 4 h Method: OECD Test Guideline 486 Result: negative Test Type: Micronucleus test Species: Mouse Application Route: Oral Method: OECD Test Guideline 474 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:

bixlozone (ISO):

Species	:	Mouse, male
Application Route	:	Oral
Exposure time	:	18 month(s)
	:	647 mg/kg bw/day
Method	:	OECD Test Guideline 451
Result	:	negative

GLP	:	yes
Species	:	Rat, female
Application Route	:	Oral
Exposure time	:	2 Years
NOAEL	:	167 mg/kg bw/day
Method	:	OECD Test Guideline 453
Result	:	negative
GLP	:	yes
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Reproductive toxicity

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

Components:

bixlozone (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male General Toxicity Parent: NOAEL: 140 mg/kg bw/day Early Embryonic Development: NOAEL: 34 - 60 mg/kg bw/day Method: OECD Test Guideline 416 GLP: yes
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 75 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 550 mg/kg bw/day Method: OECD Test Guideline 414 Result: negative GLP: yes Test Type: Embryo-fetal development Species: Rabbit Application Route: Oral Dose: 25, 75, 200, 400 mg/kg bw/day General Toxicity Maternal: NOAEL: 400 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 400 mg/kg bw/day Method: OECD Test Guideline 414 Result: negative GLP: yes
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

1,2-benzisothiazol-3(2H)-one:

Effects on fertility	:	Species: Rat, male Application Route: Ingestion General Toxicity Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Fertility: NOAEL: 112 mg/kg bw/day

Symptoms: No effects on reproduction parameters.
Method: OPPTS 870.3800
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.

STOT-repeated exposure

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

Components:

1,2-benzisothiazol-3(2H)-one:

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

Repeated dose toxicity

Components:

bixlozone (ISO):

Species	:	Rat, male
NOAEL	:	121 mg/kg bw/day
Application Route	:	Oral - feed
Exposure time	:	90 days
Method	:	OECD Test Guideline 408
GLP	:	yes

Species	:	Rat, female
NOAEL	:	351 mg/kg bw/day
Application Route	:	Oral - feed
Exposure time	:	90 days
Method	:	OECD Test Guideline 424
GLP	:	yes
Target Organs	:	Nervous system

Species	:	Rat, male
NOAEL	:	359 mg/kg bw/day
Application Route	:	Oral - feed
Exposure time	:	28 days
Method	:	OECD Test Guideline 407
GLP	:	yes
Target Organs	:	Liver

Species	:	Rat
NOAEL	:	1000 mg/kg bw/day
Application Route	:	Dermal
Exposure time	:	21 d
Method	:	OECD Test Guideline 410
GLP	:	yes

1,2-benzisothiazol-3(2H)-one:

Species	:	Rat, male and female
NOAEL	:	15 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
Symptoms	:	Irritation

Species	:	Rat, male and female
NOAEL	:	69 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 d
Symptoms	:	Irritation, Reduced body weight

Aspiration toxicity

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

Components:

bixlozone (ISO):

The substance does not have properties associated with aspiration hazard potential.

Neurological effects

Components:

bixlozone (ISO):

No neurotoxicity observed in animal studies.

Further information

Product:

Remarks	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 32 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Americamysis bahia (mysid shrimp)): 1,4 mg/l Exposure time: 96 h Test Type: static test NOEC (Americamysis bahia (mysid shrimp)): 0,78 mg/l Exposure time: 96 h Test Type: static test Method: OCSPP 850.1035

EC50 (Daphnia magna (Water flea)): 61 mg/l
End point: Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (algae)): 13 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201

EyC50 (Pseudokirchneriella subcapitata (algae)): 27 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 654,7 mg/kg
Exposure time: 14 d

Method: OECD Test Guideline 216
Remarks: No significant adverse effect on Nitrogen mineralization.

Method: OECD Test Guideline 217
Remarks: No significant adverse effect on Carbon mineralization.

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): > 2.000 mg/kg
Method: OECD Test Guideline 223

LOEC (Colinus virginianus (Bobwhite quail)): > 5.000 mg/kg
Method: OECD Test Guideline 205

LD50 (Apis mellifera (bees)): > 100 µg/bee
End point: Acute contact toxicity
Method: OECD Test Guideline 214

LD50 (Apis mellifera (bees)): > 111 µg/bee
End point: Acute oral toxicity
Method: OECD Test Guideline 213

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:

bixlozone (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 9,8 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Cyprinodon variegatus (sheepshead minnow)): > 14

mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

NOEC (Cyprinodon variegatus (sheepshead minnow)): 2,2 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 13 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

NOEC (Lepomis macrochirus (Bluegill sunfish)): 3,2 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

NOEC (Cyprinodon variegatus (sheepshead minnow)): 2,2 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Thamnocephalus platyurus): 0,11 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): 13 mg/l
End point: Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC10 (Myriophyllum spicatum): 0,0071 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 239

ErC50 (Pseudokirchneriella subcapitata (microalgae)): 14 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

EC50 (Skeletonema costatum (marine diatom)): 0,76 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

		EC10 (Skeletonema costatum (marine diatom)): 0,24 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0,38 mg/l Exposure time: 32 d Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes NOEC (Pimephales promelas (fathead minnow)): 0,1 mg/l End point: reproduction Exposure time: 21 d Test Type: flow-through test Method: OECD Test Guideline 229 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 3,1 mg/l Exposure time: 21 d Test Type: Static renewal test Method: OECD Test Guideline 211 GLP: yes NOEC (Americamysis bahia (mysid shrimp)): 0,12 mg/l Exposure time: 28 d Test Type: Reproduction Test Method: OPPTS 850.1350
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 607 mg/kg Method: OECD Test Guideline 207 GLP: yes Method: OECD Test Guideline 217 Remarks: No significant adverse effect on Carbon mineralization. Method: OECD Test Guideline 216 Remarks: No significant adverse effect on Nitrogen mineralization.
Toxicity to terrestrial organisms	:	LC50 (Anas platyrhynchos (Mallard duck)): > 5.000 mg/kg Method: OECD Test Guideline 206 LOEC (Anas platyrhynchos (Mallard duck)): 122 mg/kg End point: Reproduction Test Method: OECD Test Guideline 206 GLP: yes NOEC (Anas platyrhynchos (Mallard duck)): 69,6 mg/kg End point: Reproduction Test Method: OECD Test Guideline 206 GLP: yes

NOEL (Colinus virginianus (Bobwhite quail)): 2.000 mg/kg
Method: OPPTS 850.2100

NOEC (Colinus virginianus (Bobwhite quail)): 77,7 mg/kg
End point: Reproduction Test
Method: OECD Test Guideline 206

LOEC (Colinus virginianus (Bobwhite quail)): 103 mg/kg
End point: Reproduction Test
Method: OECD Test Guideline 206
GLP: yes

LD50 (Apis mellifera (bees)): > 100 µg/bee
End point: Acute contact toxicity
Method: OECD Test Guideline 214

LD50 (Apis mellifera (bees)): > 100 µg/bee
End point: Acute oral toxicity
Method: OECD Test Guideline 213

NOEC (Apis mellifera (bees)): ca. 9,5 µg/bee
Exposure time: 10 d
GLP: yes
Remarks: Dietary

LD50 (Apis mellifera (bees)): 59 µg/bee
Exposure time: 72 h
End point: honey bee larval toxicity test
Method: OECD 237
GLP: yes

NOED (Apis mellifera (bees)): 6,3 µg/bee
Exposure time: 22 d
End point: honey bee larval toxicity test
GLP: yes
Remarks: Dietary

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2,15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,9 mg/l
Exposure time: 48 h

Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,070 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 12,8 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Persistence and degradability

Components:

bixlozone (ISO):

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301B

Stability in water : Hydrolysis: < 5 % at 25 °C(30 d)
Method: OECD Test Guideline 111
GLP: yes
Remarks: Does not readily hydrolyze

Photodegradation : Method: OECD Test Guideline 316
Remarks: Decomposes slowly in contact with light.

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

bixlozone (ISO):

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 100 Method: OECD Test Guideline 305 Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	log Pow: 3,3 (20 °C) pH: 4 - 9 Method: OECD Test Guideline 107

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 6,62 Exposure time: 56 d Method: OECD Test Guideline 305 Remarks: Substance is not persistent, bioaccumulative, and toxic (PBT).
Partition coefficient: n-octanol/water	:	log Pow: 0,7 (20 °C) pH: 7 log Pow: 0,99 (20 °C) pH: 5

Mobility in soil

Components:

bixlozone (ISO):

Distribution among environmental compartments	:	log Koc: 2 - 3 Method: OECD Test Guideline 106 Remarks: Moderately mobile in soil
Stability in soil	:	

1,2-benzisothiazol-3(2H)-one:

Distribution among environmental compartments	:	Koc: 9,33 ml/g, log Koc: 0,97 Method: OECD Test Guideline 121 Remarks: Highly mobile in soils

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. Very toxic to aquatic life with long lasting effects.

SECTION 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 : It is prohibited to reuse, bury, burn or sell packaging.

Washable packaging: Triple wash packs of less than 20 liters and pressure wash packs of 20 liters or more. Triple Wash (Manual Wash): Completely empty the contents of the package into the sprayer tank, keeping it in an upright position for 30 seconds; Add clean water to the package up to ¼ of its volume; Cover the package well and shake it for 30 seconds; Pour the wash water into the spray tank; Do this operation three times; Make the plastic or metal packaging unusable by perforating the bottom.

Pressure wash: Fit the empty package in the appropriate place of the funnel installed on the sprayer; Activate the mechanism to release the water jet; Direct the water jet to all the inside walls of the package, for 30 seconds; Wash water must be transferred to the sprayer tank; Make the plastic or metal packaging unusable by perforating the bottom. In both procedures, puncture the container at its base without damaging the label. Within a period of up to one year from the date of purchase, the user must return the empty packaging, with lid, to the establishment where the product was purchased or to the place indicated on the invoice, issued at the time of purchase.Activate the mechanism to release the water jet. Direct the water jet to all the inside walls of the package, for 30 seconds. Wash water must be transferred to the sprayer tank. Make the plastic or metal packaging unusable by perforating the bottom.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bixlozone)

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Bixlozone)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bixlozone)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

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 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bixlozone)
Class	:	9
Packing group	:	III
Labels	:	9
Hazard Identification Number	:	90

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

Law No. 14,785 of December 27, 2023. Decree 4,074 of January 4, 2002 and its regulatory standards. ANTT Resolution No. 5,998/22 of November 3, 2022. This MSDS was prepared in accordance with the criteria of ABNT NBR 14725. The user is recommended to pay attention to local regulations.

National List of Carcinogenic Agents for Humans - (LINACH)	:	Not applicable
Brazil. List of chemicals controlled by the Federal Po-	:	Not applicable

lice

The ingredients 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. bixlozone (ISO)
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

SECTION 16. OTHER INFORMATION

Revision Date	:	24.06.2025
Date format	:	dd.mm.yyyy

Full text of other abbreviations

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 Con-

centration 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

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 insure 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.

BR / EN