SAFETY DATA SHEET
according to the Globally Harmonized System

RUGBY® 10 G

Version	Revision Date:	SDS Number:	Date of last issue: -
5.0	21.07.2025	50002158	Date of first issue: 26.04.2022

1. IDENTIFICATION

Product name : RUGBY® 10 G

Manufacturer or supplier's details

Company : FARMAGRO S.A.

Address : AV. PRINCIPAL 2 MZ. C5 LOTE 3B Z.I. HUACHIPA ESTE (LOTE 3B, 4 Y 5)
LIMA – HUAROCHIRÍ – SAN ANTONIO

Telephone : 6141500

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

Emergency telephone : 1 703 / 741-5970 (CHEMTREC - International)
Peru: 51-17071295 (CHEMTREC)

Medical Emergency Number : Desde Perú: SAMU: 106;
CISPROQUIM®: 080-050-847;
FMC LATINOAMERICA S.A. SUCURSAL: 421-4811;
Desde Bogotá: 288 60 12; Línea Nacional: 01 8000 916012
Desde Ecuador: 1800 593005 (Quito, La Sierra, Centro y Norte).
Desde Venezuela: 0800 1005012

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Use as recommended by the label.

2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin sensitization : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 1 (Nervous system)

Specific target organ toxicity - repeated exposure	:	Category 1 (Nervous system)
Short-term (acute) aquatic hazard	:	Category 1
Long-term (chronic) aquatic hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal Word : DANGER

Hazard Statements :
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Nervous system).
H372 Causes damage to organs (Nervous system) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P203 Obtain, read and follow all safety instructions before use.
P260 Do not breathe dust.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or with adequate ventilation.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P317 + P330 IF SWALLOWED: Get medical help. Rinse mouth.
P302 + P352 + P317 IF ON SKIN: Wash with plenty of water. Get medical help.
P304 + P340 + P317 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P308 + P316 IF exposed or concerned: Get emergency medical help immediately.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards which do not result in classification

Hazard Statements required by Andean Technical Manual for the Registration and Control of Chemical Pesticides for Agricultural Use (Resolution no. 2075):
Harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Cellulose	9004-34-6	>= 70 - < 90
Cadusafos	95465-99-9	>= 10 - < 20
2-ethylhexanoic acid, copper salt	22221-10-9	>= 0,1 - < 0,25
Naphthenic acids, copper salts	1338-02-9	>= 0,025 - < 0,1

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 : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

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 : Do not induce vomiting without medical advice.
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.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed, in contact with skin or if inhaled. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Contains a cholinesterase inhibitor. Symptoms may include nausea, diarrhea, vomiting, decreased appetite, indigestion, muscle cramps, fatigue, insomnia, dizziness, headache, and lack of energy.
Protection of first-aiders	:	Avoid inhalation, ingestion and contact with skin and eyes.
Notes to physician	:	Treat symptomatically.

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. Carbon oxides phosphorus oxides Sulfur oxides Carbon oxides Fire may produce irritating, corrosive and/or toxic gases. phosphorus oxides Sulfur oxides
Specific extinguishing methods	:	Use a water spray to cool fully closed containers. Remove undamaged containers from fire area if it is safe to do so. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	If it can be safely done, stop the leak. Do not touch or walk through the spilled material. Use personal protective equipment. Evacuate personnel to safe areas. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
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	:	Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/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. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
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.
Further information on storage stability	:	No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Cellulose	9004-34-6	TWA	10 mg/m3	PE OEL
		TWA	10 mg/m3	ACGIH
Cadusafos	95465-99-9	TWA (Inhalable fraction and vapor)	0,001 mg/m3	ACGIH

Personal protective equipment

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

Filter type : Particulates type

No personal respiratory protective equipment normally required.

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 : Dust impervious protective suit
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.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Do not breathe dust.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : solid

Form : granules

Color : gray

Odor : No data available

Odor Threshold	:	No data available
pH	:	6,8
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	Not applicable
Relative vapor density	:	Not applicable
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Surface tension	:	Not applicable
Molecular weight	:	Not applicable

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. Dust may form explosive mixture in air.
Conditions to avoid	:	Avoid extreme temperatures. Avoid dust formation. Heat, flames and sparks.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Harmful if swallowed, in contact with skin or if inhaled.

Product:

Acute oral toxicity	:	LD50(Rat): 391 mg/kg
Acute inhalation toxicity	:	LC50(Rat): 2,05 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50(Rat): > 2.000 mg/kg Assessment: The component/mixture is minimally toxic after single contact with skin. Assessment: The component/mixture is moderately toxic after single contact with skin. Remarks: Resolution no. 2075

Components:

Cellulose:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5,8 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Cadusafos:

Acute oral toxicity : LD50 (Rat, female): 34 - 51 mg/kg
Method: US EPA Test Guideline OPP 81-1
Symptoms: Diarrhea, hemorrhage

LD50 (Mouse): 71,4 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0,026 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: US EPA Test Guideline OPP 81-3
Symptoms: Breathing difficulties, Tremors

Acute dermal toxicity : LD50 (Rabbit, male): 7 - 17 mg/kg
Method: US EPA Test Guideline OPP 81-2

LD50 (Rabbit, female): 5 - 16 mg/kg
Method: US EPA Test Guideline OPP 81-2

2-ethylhexanoic acid, copper salt:

Acute oral toxicity : LD50 Oral (Rat, female): 2.043 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat, male and female): 2.000 mg/kg
Method: OECD Test Guideline 402

Naphthenic acids, copper salts:

Acute oral toxicity : LD50 (Rat, male and female): 300 - 500 mg/kg
Method: OECD Test Guideline 423
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit, male and female): 3.160 mg/kg
Method: OECD Test Guideline 402
Symptoms: Lethargy, Diarrhea, anorexia
Remarks: Based on data from similar materials

Skin corrosion/irritation

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

Product:

Species : Rabbit
Assessment : No skin irritation
Method : EPA OPP 81-5
Result : No skin irritation

Remarks : May cause skin irritation and/or dermatitis.

Components:

Cellulose:

Species : Rabbit
Result : No skin irritation

Cadusafos:

Species : Rabbit
Result : No skin irritation

2-ethylhexanoic acid, copper salt:

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

Naphthenic acids, copper salts:

Species : Rabbit
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
Assessment : No eye irritation
Method : EPA OPP 81-4
Result : No eye irritation
Remarks : Product dust may be irritating to eyes, skin and respiratory system.

Components:

Cellulose:

Species : Rabbit
Result : No eye irritation

Cadusafos:

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

2-ethylhexanoic acid, copper salt:

Species : Bovine cornea
Method : OECD Test Guideline 437

Result : Irreversible effects on the eye

Naphthenic acids, copper salts:

Method : in vitro eye irritation test
Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

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

Product:

Routes of exposure : Skin contact
Species : Guinea pig
Assessment : May cause sensitization by skin contact.
Result : May cause sensitization by skin contact.

Remarks : Causes sensitization.

Remarks : Causes sensitization.

Components:

Cellulose:

Species : Guinea pig
Result : Not a skin sensitizer.

Cadusafos:

Routes of exposure : Skin contact
Species : Guinea pig
Result : Not a skin sensitizer.

2-ethylhexanoic acid, copper salt:

Test Type : Open epicutaneous test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.

Naphthenic acids, copper salts:

Test Type : Maximization Test
Species : Guinea pig
Result : Causes sensitization.
Remarks : Based on data from similar materials

Germ cell mutagenicity

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

Components:

Cellulose:

Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Cadusafos:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: negative Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative

2-ethylhexanoic acid, copper salt:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Application Route: Oral Method: Mutagenicity (micronucleus test) Result: negative

Naphthenic acids, copper salts:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Application Route: Ingestion Exposure time: 48 h Method: Mutagenicity (micronucleus test) Result: negative Remarks: Based on data from similar materials

Carcinogenicity

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

Components:

Cadusafos:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Cadusafos:

Reproductive toxicity - Assessment : Animal testing showed no reproductive toxicity.
Animal testing showed no developmental toxicity.

2-ethylhexanoic acid, copper salt:

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

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rabbit
Application Route: Oral

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Naphthenic acids, copper salts:

Effects on fertility : Species: Rat, male and female
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Species: Rat, male and female
Application Route: Ingestion
General Toxicity F1: NOAEL: 100 mg/kg body weight
Remarks: Based on data from similar materials

Effects on fetal development : Species: Rabbit
Application Route: Ingestion
General Toxicity Maternal: NOAEL: 7,5 mg/kg body weight
Developmental Toxicity: NOAEL: 15 mg/kg body weight
Target Organs: Stomach, Kidney
Method: OECD Test Guideline 414
Result: positive
Remarks: Based on data from similar materials

STOT-single exposure

Causes damage to organs (Nervous system).

Components:

Cadusafos:

Target Organs	:	Nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

STOT-repeated exposure

Causes damage to organs (Nervous system) through prolonged or repeated exposure.

Components:

Cadusafos:

Target Organs	:	Nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Repeated dose toxicity

Components:

Cadusafos:

Species	:	Mouse, male
NOAEL	:	2,45 mg/kg
LOAEL	:	8 mg/kg
Application Route	:	Oral - feed
Exposure time	:	28 d
Dose	:	0.83, 2.45, 8.0
GLP	:	yes
Symptoms	:	Red blood cell acetylcholinesterase inhibition

Species	:	Rat, male
LOAEL	:	4,7 mg/kg
Application Route	:	Oral - feed
Exposure time	:	28 d
Dose	:	0, 4.7, 9.3, 19.6, 39.9, 56.2
GLP	:	yes
Symptoms	:	Red blood cell acetylcholinesterase inhibition

2-ethylhexanoic acid, copper salt:

Species	:	Mouse
NOAEL	:	180 - 205 mg/kg
Application Route	:	Oral
Exposure time	:	13 weeks

Species	:	Rat
NOAEL	:	2 mg/l
Application Route	:	Inhalation
Exposure time	:	28 d
Method	:	OECD Test Guideline 412

Naphthenic acids, copper salts:

Species	:	Mouse, male and female
NOAEL	:	1.000 mg/l
LOAEL	:	2.000 mg/l
Application Route	:	Ingestion
Method	:	Regulation (EC) No. 440/2008, Annex, B.26
Remarks	:	Based on data from similar materials

Aspiration toxicity

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

Further information

Product:

Remarks	:	No data available
Remarks	:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Cellulose:

Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae/aquatic plants	:	Remarks: No data available
Toxicity to microorganisms	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: No data available

Cadusafos:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,13 mg/l Exposure time: 96 h LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,14 - 0,21 mg/l Exposure time: 96 h LC50 (Salmo gairdneri): 0,11 - 0,15 mg/l Exposure time: 96 h Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,0004 - 0,0013 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EbC50 (Scenedesmus subspicatus): 4,3 mg/l Exposure time: 72 h GLP: yes
M-Factor (Acute aquatic toxicity)	:	1.000
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,0052 mg/l Exposure time: 21 d Species: Fish
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,00023 mg/l Exposure time: 21 d Species: Crustaceans
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to soil dwelling organisms	:	NOEC: 3,2 mg/kg Exposure time: 28 d Species: Eisenia fetida (earthworms) GLP: yes
Toxicity to terrestrial organisms	:	LD50: 1,86 µg/bee Exposure time: 48 h Species: Apis mellifera (bees) Remarks: Contact LD50: 2,07 µg/bee Exposure time: 48 h Species: Apis mellifera (bees) Remarks: Oral LD50: 7,1 - 36,1 mg/kg Species: Colinus virginianus (Bobwhite quail) GLP: yes LD50: 183 - 288 mg/kg Species: Anas platyrhynchos (Mallard duck) GLP: yes

2-ethylhexanoic acid, copper salt:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): 180 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): 85,4 mg/l

aquatic invertebrates		Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Lemna minor (duckweed)): 0,030 mg/l Exposure time: 7 d Remarks: Based on data from similar materials NOEC (Desmodesmus subspicatus (green algae)): 49,3 mg/l Exposure time: 96 h
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 112,1 mg/l Exposure time: 17 h Method: DIN 38 412 Part 8
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,0022 mg/l Exposure time: 21 d Species: Oncorhynchus mykiss (rainbow trout) Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 25 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Chronic Toxicity Value: 75 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Chronic Toxicity Value: 63 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1

Naphthenic acids, copper salts:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 38,4 µg/l Exposure time: 96 h Test Type: flow-through test Remarks: Based on data from similar materials LC50 (Pimephales promelas (fathead minnow)): 5,62 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 20 mg/l Exposure time: 48 h Test Type: semi-static test Method: OECD Test Guideline 202 Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 29,6 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (Vibrio fischerii (Bacteria)): 13 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	:	NOEC: 18,9 µg/l Exposure time: 7 d Species: Pimephales promelas (fathead minnow) NOEC: 120 µg/l End point: mortality Exposure time: 64 d Species: Fish Method: OECD Test Guideline 204
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 6,3 µg/l Exposure time: 7 d Species: Ceriodaphnia dubia (water flea) Remarks: Based on data from similar materials NOEC: 4 µg/l Exposure time: 7 d Species: Ceriodaphnia dubia (water flea) Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	:	10

Persistence and degradability

Components:

Cellulose:

Biodegradability	:	Remarks: No data available

Cadusafos:

Biodegradability	:	Remarks: Not readily biodegradable.

2-ethylhexanoic acid, copper salt:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 99 %

Exposure time: 28 d
Method: OECD Test Guideline 301E

Naphthenic acids, copper salts:

Biodegradability : Result: Inherently biodegradable.
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Cellulose:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Cadusafos:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 220

Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 3,9

2-ethylhexanoic acid, copper salt:

Partition coefficient: n-octanol/water : log Pow: 2,96

Naphthenic acids, copper salts:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 4 d
Bioconcentration factor (BCF): 2

Partition coefficient: n-octanol/water : log Pow: 7,65

Mobility in soil

Components:

Cadusafos:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Other adverse effects

Product:

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

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 containers. Rinsable containers: Triple rinse containers of less than 20 liters and pressure rinse containers of 20 liters or more. Triple rinsing: Add water up to ¼ of the container's capacity, close and shake for 30 seconds. Pour the rinse water into the mixing tank, considering this volume of water within the recommended volume for mixing preparation. Perform this procedure three times. Pressure rinsing: Activate the pressure rinsing device for 30 seconds, considering the volume of water used as part of the recommended volume for mixing preparation. In both procedures, punctured the container on its base without damaging the label. In all cases, take the empty containers to collection points indicated by the local empty containers program.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cadusafos, Copper naphthenate)
Class	:	9
Subsidiary risk	:	ENVIRONM.
Packing group	:	III
Labels	:	9 (ENVIRONM.)
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (Cadusafos, Copper naphthenate)

Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cadusafos, Copper naphthenate)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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.

15. REGULATORY INFORMATION

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

Control Act of precursor chemicals and controlled products. : nonane

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

TCSI	:	On the inventory, or 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. Cadusafos
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory

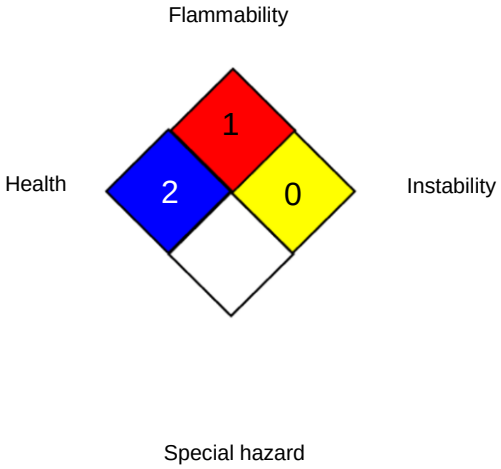
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

16. OTHER INFORMATION

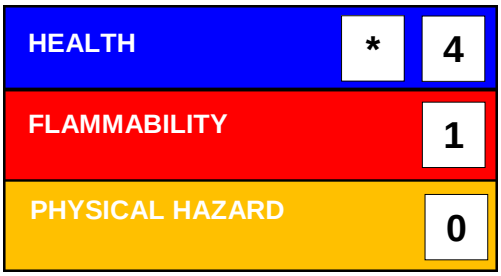
Revision Date	:	21.07.2025
Date format	:	dd.mm.yyyy

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
PE OEL	:	Peru. Regulation adopting Limit Values for Chemical Agents in the Working Environment.
ACGIH / TWA	:	8-hour, time-weighted average
PE OEL / TWA	:	Time Weighted Average

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

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.

PE / EN