SAFETY DATA SHEET

GAMIT STAR®

Version	Revision Date:	SDS Number:	Date of last issue: -
3.0	01.05.2025	50000002	Date of first issue: 01.05.2025

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GAMIT STAR®

Other means of identification : Gamit Star® 800 EC

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 : Herbicide

Restrictions on use : Use as recommended by the label.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 5

Acute toxicity (Inhalation) : Category 5

Acute toxicity (Dermal) : Category 5

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 2 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Kidney, Liver)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard	:	Category 2
Long-term (chronic) aquatic hazard	:	Category 1

GHS label elements in accordance with ABNT NBR 14725 Standard

Hazard pictograms :

Signal Word : DANGER

Hazard Statements :

H226 Flammable liquid and vapor.
H303 + H313 + H333 May be harmful if swallowed, in contact with skin or if inhaled.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H371 May cause damage to organs (Central nervous system).
H373 May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe mist or vapors.
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/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P312 IF ON SKIN: Call a POISON CENTER/ doctor if you feel unwell.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P312 IF INHALED: Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

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)
clomazone (ISO)	81777-89-1	Acute Tox. (Oral), 4 Acute Tox. (Dermal), 5 Aquatic Acute, 1 Aquatic Chronic, 1	>= 70 -< 90
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	Flam. Liq., 3 Acute Tox. (Oral), 5 Acute Tox. (Inhalation), 4 Acute Tox. (Dermal), 5 Skin corrosion/irritation, 2 Serious eye damage/eye irritation, 2A Carc., 2 STOT SE, (Respiratory system, Central nervous system) , 3 Asp. Tox., 1 Aquatic Acute, 2 Aquatic Chronic, 2	>= 10 -< 20
2-methylpropan-1-ol	78-83-1	Flam. Liq., 3	>= 1 -< 3

		Acute Tox. (Oral), 5 Acute Tox. (Dermal), 5 Skin corro-sion/irritation, 2 Serious eye dam-age/eye irritation, 1 STOT SE, (Respirato-ry system, Central nervous system) , 3	
o-Chlorobenzaldehyde	89-98-5	Met. Corr., 1 Acute Tox. (Oral), 4 Skin Sens., 1 Aquatic Chronic, 2	>= 0,1 -< 0,25

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attend-ance. Symptoms of poisoning may appear several hours later. 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	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	May be harmful if swallowed, in contact with skin or if inhaled. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure.
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. Carbon oxides
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	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
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	:	Do not spray on a naked flame or any incandescent material.

fire and explosion		Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. 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	:	No smoking. 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
2-methylpropan-1-ol	78-83-1	LT	40 ppm 115 mg/m3	BR OEL
		Further information: Degree of harmfulness: medium		
		TWA	50 ppm	ACGIH

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
Color	:	dark yellow
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	7,37 (20 °C)
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	43 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Readily gives off flammable vapors
Flammability (liquids)	:	Sustains combustion
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	:	0,019 Pa (25 °C)
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1,137 g/cm3
Solubility(ies)		
Water solubility	:	Miscible
Solubility in other solvents	:	Solvent: dichloromethane Description: completely miscible Solvent: Acetone Description: completely miscible Solvent: hexane Description: completely miscible
Partition coefficient: n-octanol/water	:	Pow: 2,5
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	77,35 mPa.s (20 °C) 35,37 mPa.s (40 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable

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	:	Vapors may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Heat, flames and sparks. 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, in contact with skin or if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): 2.500 mg/kg Method: OECD Test Guideline 423 Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat): > 6,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: ataxia, wheezing Assessment: The component/mixture is minimally toxic after short term inhalation. Remarks: no mortality
Acute dermal toxicity	:	LD50 (Rat): > 4.000 mg/kg Method: OECD Test Guideline 402 Assessment: The component/mixture is minimally toxic after single contact with skin. Remarks: no mortality

Components:

clomazone (ISO):

Acute oral toxicity	:	LD50 (Rat, female): 768 mg/kg Method: OECD Test Guideline 425 LD50 (Rat, female): 300 - 2.000 mg/kg Method: OECD Test Guideline 423 Target Organs: Liver Assessment: The component/mixture is moderately toxic after single ingestion. LD50 (Rat, female): 1.564 mg/kg Symptoms: ataxia
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 12,1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: apathy Assessment: The substance or mixture has no acute inhala-

tion toxicity
Remarks: no mortality

LC50 (Rat): > 7,4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
Method: US EPA Test Guideline OPP 81-2
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

LD50 (Rabbit, male and female): > 4.000 mg/kg
Method: OECD Test Guideline 402
Remarks: no mortality

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity : LD50 (Rat, female): 3.492 mg/kg
Method: OECD Test Guideline 401

LD50 (Rat, male): 6.984 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 6,193 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 3.160 mg/kg
Assessment: The component/mixture is minimally toxic after single contact with skin.

2-methylpropan-1-ol:

Acute oral toxicity : LD50 (Rat): 3.350 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 18,18 mg/l
Exposure time: 6 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 2.460 mg/kg

o-Chlorobenzaldehyde:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Causes skin irritation.

Product:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Result : slight irritation

Remarks : May cause skin irritation and/or dermatitis.

Components:

clomazone (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Result : slight or no skin irritation.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

Assessment : Irritating to skin.

2-methylpropan-1-ol:

Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit
Result : slight irritation
Assessment : Not classified as irritant
Method : OECD Test Guideline 405

Remarks : May cause irreversible eye damage.

Components:

clomazone (ISO):

Species : Rabbit
Result : Slight or no eye irritation
Assessment : Not classified as irritant
Method : OECD Test Guideline 405

GLP : yes

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rabbit
Result : No eye irritation

Assessment : Irritating to eyes.

2-methylpropan-1-ol:

Species : Rabbit
Result : Irreversible effects on the eye

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:

Routes of exposure : Dermal
Species : Guinea pig
Assessment : Not a skin sensitizer.
Method : OECD Test Guideline 406
Result : Did not cause sensitization on laboratory animals.

Components:

clomazone (ISO):

Test Type : Buehler Test
Species : Guinea pig
Assessment : Not a skin sensitizer.
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.
GLP : yes

Species : Guinea pig
Assessment : Not a skin sensitizer.
Method : US EPA Test Guideline OPP 81-6
Result : Not a skin sensitizer.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

2-methylpropan-1-ol:

Routes of exposure : Skin contact

Result : Not a skin sensitizer.

o-Chlorobenzaldehyde:

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

Germ cell mutagenicity

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

Product:

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

Genotoxicity in vivo : Test Type: Micronucleus test
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects., Test on bacterial cultures did not show mutagenic effects.

Components:

clomazone (ISO):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Cytogenetic assay
Species: Rat
Method: OECD Test Guideline 473
Result: negative

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Genotoxicity in vitro : Test Type: in vitro DNA damage and/or repair study
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo	:	Test Type: Bone marrow chromosome aberration. Species: Rat (male and female) Application Route: Inhalation Result: negative

2-methylpropan-1-ol:

Genotoxicity in vitro	:	Result: negative
Genotoxicity in vivo	:	Result: negative

Carcinogenicity

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

Product:

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

Components:

clomazone (ISO):

Species	:	Rat, male and female
Application Route	:	Oral
Exposure time	:	2 Years
Result	:	negative
Species	:	Mouse
Method	:	OECD Test Guideline 453
Result	:	negative

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

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

Product:

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

Components:

clomazone (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Oral

Symptoms: Maternal effects.
Result: negative

Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Oral
Symptoms: Maternal effects.
Result: negative

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Effects on fertility : Test Type: Three-generation study
Species: Rat
Application Route: inhalation (vapor)
Fertility: NOAEC Mating/Fertility: 7,5 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Species: Mouse
Application Route: inhalation (vapor)
General Toxicity Maternal: LOAEC: 500 part per million
Symptoms: Maternal effects.

2-methylpropan-1-ol:

Effects on fertility : Species: Rat
Application Route: Inhalation
Fertility: NOAEC Mating/Fertility: 7,5 mg/l

STOT-single exposure

May cause damage to organs (Central nervous system).

Product:

Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : May cause respiratory irritation.
May cause drowsiness or dizziness.

2-methylpropan-1-ol:

Assessment : May cause respiratory irritation.
May cause drowsiness or dizziness.

STOT-repeated exposure

May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.

Product:

Target Organs : Kidney, Liver
Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

Repeated dose toxicity

Components:

clomazone (ISO):

Species	:	Rat, male and female
NOEL	:	1000 ppm
Application Route	:	Oral
Exposure time	:	90 days
Symptoms	:	increased liver weight
Species	:	Rat
LOAEL	:	400 mg/kg
Exposure time	:	90 d
Method	:	OECD Test Guideline 408
Symptoms	:	Liver effects

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species	:	Rat, male and female
NOAEC	:	0,8 - 0,9 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapor
Remarks	:	Based on data from similar materials
Species	:	Rat, male
NOAEL	:	600 mg/kg
Application Route	:	Oral
Remarks	:	Based on data from similar materials

2-methylpropan-1-ol:

Species	:	Rat
	:	1450 mg/kg
Application Route	:	Oral
Species	:	Rat
	:	7,5 mg/l
Application Route	:	Inhalation

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Components:

clomazone (ISO):
The substance does not have properties associated with aspiration hazard potential.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:
May be fatal if swallowed and enters airways.

Further information

Product:

Remarks	:	Solvents may degrease the skin.

Components:

clomazone (ISO):

Remarks	:	When fed to animals, clomazone caused decreased activity, tearing eyes, bleeding from the nose and incoordination.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 35,95 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia similis (Water flea)): 4,57 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 11,38 mg/l Exposure time: 96 h

Components:

clomazone (ISO):

Toxicity to fish	:	LC50 (Menidia beryllina (Silverside)): 6,3 mg/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): > 45 mg/l Exposure time: 96 h LC50 (Lepomis macrochirus (Bluegill sunfish)): 34 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 40,8 mg/l Exposure time: 48 h EC50 (Daphnia): 5,2 mg/l Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 12,7 mg/l
Exposure time: 48 h
Test Type: static test

EC50 (Mysidopsis bahia (opossum shrimp)): 9,8 mg/l
Exposure time: 48 h

LC50 (Americamysis bahia (mysid shrimp)): 0,57 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae/aquatic plants : EbC50 (Selenastrum capricornutum (green algae)): 2 mg/l
Exposure time: 72 h

ErC50 (Selenastrum capricornutum (green algae)): 4,1 mg/l
Exposure time: 72 h

ErC50 (Navicula pelliculosa (Freshwater diatom)): 0,136 mg/l
Exposure time: 120 h

EC50 (Lemna gibba (duckweed)): 13,9 mg/l
Exposure time: 7 d

NOEC (Navicula pelliculosa (Freshwater diatom)): 0,05 mg/l
End point: Growth rate
Exposure time: 120 h

NOEC (algae): 0,05 mg/l
Exposure time: 96 h

EC50 (Lemna gibba (duckweed)): 13,9 mg/l
Exposure time: 7 d

EC50 (algae): 0,136 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 2,3 mg/l
Exposure time: 21 d
Test Type: flow-through test

NOEC (Oncorhynchus mykiss (rainbow trout)): 2,29 mg/l
Exposure time: 57 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2,2 mg/l
Exposure time: 21 d

NOEC (Americamysis bahia (mysid shrimp)): 0,032 mg/l
Exposure time: 28 d
Test Type: flow-through test

NOEC (Daphnia magna (Water flea)): 1,25 mg/l
Exposure time: 21 d
Test Type: static test

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 391,2 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Anas platyrhynchos (Mallard duck)): > 2.510 mg/kg

LC50 (Anas platyrhynchos (Mallard duck)): > 5620 ppm
Remarks: Dietary

LD50 (Coturnix japonica (Japanese quail)): > 2000

NOEC (Colinius virginianus): 94 mg/kg
End point: Reproduction Test

LC50 (Apis mellifera (bees)): > 85.29

LC50 (Apis mellifera (bees)): > 100
Remarks: Contact

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 4,5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LL50 (Pimephales promelas (fathead minnow)): 8,2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 4,5 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3,1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOELR (Pimephales promelas (fathead minnow)): 2,6 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR (Daphnia magna (Water flea)): 2,6 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (Tetrahymena pyriformis): 15,41 mg/l Exposure time: 40 h Test Type: Growth inhibition Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Ecotoxicology Assessment

Acute aquatic toxicity	:	Toxic to aquatic life.
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

2-methylpropan-1-ol:

Toxicity to fish	:	LC50 : 1.430 mg/l Exposure time: 4 d
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 1.100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 20 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (Anabaena flos-aquae (cyanobacterium)): 593 - 1.799 mg/l Exposure time: 72 h IC50 (Natural microorganism): 1.000 mg/l Exposure time: 16 h

o-Chlorobenzaldehyde:

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

clomazone (ISO):

Biodegradability	:	Result: Not readily biodegradable. Remarks: Substance/product is moderately persistent in the environment. Primary degradation half-lives vary with circumstances, from a few weeks to a few months in aerobic soil and water.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability : Concentration: 49,2 mg/l
Result: Inherently biodegradable.
Biodegradation: 77,05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

2-methylpropan-1-ol:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Remarks: No data available

Remarks: No data available

Components:

clomazone (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 27 - 40
Remarks: Low potential for bioaccumulation

Partition coefficient: n-octanol/water : log Pow: 2,365 (20 °C)
Method: OECD Test Guideline 107

log Pow: 2,61 - 2,69 (20 - 21 °C)
pH: 4 - 10
Method: Regulation (EC) No. 440/2008, Annex, A.8

2-methylpropan-1-ol:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : Pow: 10 (25 °C)

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: Highly mobile in soils

Remarks: This chemical is known to leach through soil into ground water under certain conditions.

Components:

clomazone (ISO):

Distribution among environmental compartments	:	Koc: 300 ml/g, log Koc: 2,47 Remarks: Moderately mobile in soils
Stability in soil	:	

Other adverse effects

Product:

Environmental fate and pathways	:	Remarks: see user defined free text
Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Components:

clomazone (ISO):

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.

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 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light aromatic, Isobutyl Alcohol, Clomazone)
Class	:	3
Packing group	:	III
Labels	:	3
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 1993
Proper shipping name	:	Flammable liquid, n.o.s. (Solvent naphtha (petroleum), light aromatic, Isobutyl Alcohol, Clomazone)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light aromatic, Isobutyl Alcohol, Clomazone)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
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 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha (petroleum), light aromatic, Isobutyl Alcohol, Clomazone)
Class	:	3
Packing group	:	III

Labels : 3
Hazard Identification Number : 30

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 Police : 2-methylpropan-1-ol

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.

clomazone (ISO)
o-Chlorobenzaldehyde

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	:	01.05.2025
Date format	:	dd.mm.yyyy

Full text of other abbreviations

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

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

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