

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : LOGRAN
Design code : A7492A

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

Use of the Substance/Mixture : Herbicide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta SA (Pty) Ltd
P.O. Box 1044, No. 4 Krokodil drift Avenue
Brits 0250
South Africa

Telephone : +27 (0)12 2506 300

Telefax : -

E-mail address of person responsible for the SDS : sds.ame@syngenta.com

1.4 Emergency telephone number

Emergency telephone number : +27 (0) 82 446 8946 (Griffon)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Short-term (acute) aquatic hazard, Category 1 H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1 H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Response:**

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

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

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards

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

May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
triasulfuron (ISO)	82097-50-5 650-041-00-9	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 1.000	>= 70 - < 90
gum arabic	9000-01-5 232-519-5	Eye Irrit. 2; H319	>= 1 - < 10
reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda	Not Assigned 01-2119980979-09-xxxx	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)	>= 1 - < 3
methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44-xxxx	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 0,1 - < 1

LOGRAN

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.2	19.10.2022	S11305821	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | | |
|-------------------------|---|---|
| General advice | : | Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment. |
|
 | | |
| If inhaled | : | Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or poison control centre immediately. |
|
 | | |
| In case of skin contact | : | Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use. |
|
 | | |
| In case of eye contact | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required. |
|
 | | |
| If swallowed | : | If swallowed, seek medical advice immediately and show this container or label.
Do NOT induce vomiting. |

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|----------|---|---|
| Symptoms | : | Nonspecific
No symptoms known or expected. |
|----------|---|---|

4.3 Indication of any immediate medical attention and special treatment needed

- | | | |
|-----------|---|--|
| Treatment | : | There is no specific antidote available.
Treat symptomatically. |
|-----------|---|--|

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | | |
|------------------------------|---|---|
| Suitable extinguishing media | : | Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray |
|
 | | |
| Unsuitable extinguishing | : | Do not use a solid water stream as it may scatter and spread |

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

media fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Refer to protective measures listed in sections 7 and 8.
Avoid dust formation.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
Do not create a powder cloud by using a brush or compressed air.
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

This material can become readily charged in most operations.

Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Further information on storage stability : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
triasulfuron (ISO)	82097-50-5	TWA	3 mg/m ³	Syngenta
methanol	67-56-1	OEL-RL	400 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL- RL STEL/C	500 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	200 ppm 260 mg/m ³	2006/15/EC

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
methanol	67-56-1	Methanol: 15 mg/l (Urine)	End of shift	ZA BEI

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
sodium sulphate	Workers	Inhalation	Systemic effects	20 mg/m ³
	Workers	Inhalation	Local effects	20 mg/m ³
	Consumers	Inhalation	Systemic effects	12 mg/m ³
	Consumers	Inhalation	Local effects	12 mg/m ³

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

methanol	Workers	Dermal	Short-term exposure, Systemic effects	40 mg/kg
	Workers	Inhalation	Short-term exposure, Systemic effects	260 mg/m ³
	Workers	Inhalation	Short-term exposure, Local effects	260 mg/m ³
	Workers	Dermal	Long-term systemic effects	40 mg/kg
	Workers	Inhalation	Long-term systemic effects	260 mg/m ³
	Workers	Inhalation	Long-term local effects	260 mg/m ³
	Consumers	Dermal	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Systemic effects	50 mg/m ³
	Consumers	Oral	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Long-term local effects	50 mg/m ³
	Consumers	Oral	Long-term systemic effects	8 mg/kg
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
	Consumers	Dermal	Long-term systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Local effects	50 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
sodium sulphate	Fresh water	11,09 mg/l
	Freshwater - intermittent	17,66 mg/l
	Marine water	1,109 mg/l
	Sewage treatment plant	800 mg/l
	Fresh water sediment	40,2 mg/kg dry weight (d.w.)
	Marine sediment	4,02 mg/kg dry weight (d.w.)
	Soil	1,54 mg/kg dry weight (d.w.)
methanol	Fresh water	154 mg/l
	Marine water	15,4 mg/l
	Soil	22,5 mg/kg
	Sewage treatment plant	100 mg/l

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

LOGRAN

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.2	19.10.2022	S11305821	

Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye/face protection	:	No special protective equipment required.
Hand protection	:	
Remarks	:	No special protective equipment required.
Skin and body protection	:	No special protective equipment required. Select skin and body protection based on the physical job requirements.
Respiratory protection	:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protective measures	:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	granules
Colour	:	beige to beige brown
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	4 - 8 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	May form combustible dust concentrations in air.
Burning number	:	2 (20 °C)
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

Density : No data available

Bulk density : 0,50 - 0,70 g/cm³

Solubility(ies)
Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Minimum ignition temperature : 550 °C

Self-heating substances : The substance or mixture is not classified as self heating.

Minimum ignition energy : 100 - 300 mJ

Particle size : No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Information on likely routes of exposure : Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity**Product:**

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:**triasulfuron (ISO):**

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.185 mg/m3
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Acute oral toxicity : LD50 (Rat): 1.800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4,08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 3.000 mg/kg

methanol:

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

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

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

Acute dermal toxicity : Assessment: The component/mixture is toxic after single contact with skin.

Skin corrosion/irritation**Product:**

Species : Rabbit
Result : No skin irritation

Components:**triasulfuron (ISO):**

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : No eye irritation

Components:**triasulfuron (ISO):**

Species : Rabbit
Result : No eye irritation

gum arabic:

Result : Eye irritation

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Species : Rabbit
Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation**Product:**

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

Components:**triasulfuron (ISO):**

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

Germ cell mutagenicity**Components:****triasulfuron (ISO):**

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

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

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

methanol:

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

Carcinogenicity**Components:****triasulfuron (ISO):**

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

methanol:

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity**Components:****triasulfuron (ISO):**

Reproductive toxicity -
Assessment : No toxicity to reproduction

methanol:

Reproductive toxicity -
Assessment : No toxicity to reproduction

STOT - single exposure**Components:****reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:**

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

methanol:

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

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

STOT - repeated exposure

Components:

triasulfuron (ISO):

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

triasulfuron (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna Straus): > 100 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0,57 mg/l Exposure time: 96 h EC10 (Raphidocelis subcapitata (freshwater green alga)): 0,079 mg/l End point: Growth rate Exposure time: 96 h ErC50 (Lemna gibba (gibbous duckweed)): 0,00028 mg/l End point: Frond growth Exposure time: 7 d NOEC (Lemna gibba (gibbous duckweed)): 0,00008 mg/l End point: Growth rate Exposure time: 7 d
M-Factor (Acute aquatic toxicity)	:	1.000
Toxicity to microorganisms	:	IC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: > 36,6 mg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow) NOEC: 10 mg/l Exposure time: 34 d Species: Cyprinodon variegatus (sheepshead minnow)
Toxicity to daphnia and other aquatic invertebrates	:	NOEC: 10 mg/l Exposure time: 21 d

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

(Chronic toxicity) Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1.000

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae/aquatic plants : EC50 (Raphidocelis subcapitata (freshwater green alga)): > 200 mg/l
Exposure time: 72 h
Remarks: Information given is based on data obtained from similar substances.

12.2 Persistence and degradability

Components:

triasulfuron (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: ca. 210 d
Remarks: Persistent in water.

reaction product of naphthalene, butanol, sulfonated and neutralized by caustic soda:

Biodegradability : Result: Readily biodegradable.
Remarks: Information given is based on data obtained from similar substances.

12.3 Bioaccumulative potential

Components:

triasulfuron (ISO):

Bioaccumulation : Remarks: Low bioaccumulation potential.

Partition coefficient: n-octanol/water : log Pow: -0,59 (25 °C)

12.4 Mobility in soil

Components:

triasulfuron (ISO):

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 3 - 83 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

12.5 Results of PBT and vPvB assessment**Product:**

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

Components:**triasulfuron (ISO):**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

methanol:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects**Product:**

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

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

- Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
- Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

LOGRAN

Version 3.2 Revision Date: 19.10.2022 SDS Number: S11305821 This version replaces all previous versions.

SECTION 14: Transport information**14.1 UN number**

UNRTDG : UN 3077
IMDG : UN 3077
IATA : UN 3077

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRIASULFURON)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRIASULFURON)
IATA : Environmentally hazardous substance, solid, n.o.s. (TRIASULFURON)

14.3 Transport hazard class(es)

UNRTDG : 9
IMDG : 9
IATA : 9

14.4 Packing group

UNRTDG
Packing group : III
Labels : 9
IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F
IATA (Cargo)
Packing instruction (cargo aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous
IATA (Passenger)
Packing instruction (passenger aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

IMDG
Marine pollutant : yes
IATA (Passenger)

LOGRAN

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.2	19.10.2022	S11305821	

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Other regulations:

None known.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H225	: Highly flammable liquid and vapour.
H301	: Toxic if swallowed.
H302	: Harmful if swallowed.
H311	: Toxic in contact with skin.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H331	: Toxic if inhaled.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H370	: Causes damage to organs.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
STOT SE	: Specific target organ toxicity - single exposure
2006/15/EC	: Europe. Indicative occupational exposure limit values
ZA BEI	: South Africa. The Regulations for Hazardous Chemical Agents, Biological Exposure Indices
ZA OEL	: South Africa. The Regulations for Hazardous Chemical

LOGRAN

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.2	19.10.2022	S11305821	

	Agents, Occupational Exposure Limits
2006/15/EC / TWA	: Limit Value - eight hours
ZA OEL / OEL-RL	: Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)
ZA OEL / OEL- RL STEL/C	: Occupational Exposure Limit Restricted limit - Short term occupational exposure limits / ceiling limits

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the

LOGRAN

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.2	19.10.2022	S11305821	

specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

ZA / EN