HALEX GT

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	04/21/2023	S00037122796	

SECTION 1. IDENTIFICATION

Product name : HALEX GT

Design code : A15189J

Product Registration number : 29341

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Syngenta Canada Inc.

Address : 140 Research Lane, Research Park
Guelph ON N1G 4Z3
Canada

Telephone : 1-87-SYNGENTA (1-877-964-3682)

Telefax : 1-519-823-0504

E-mail address :

Emergency telephone number : 1-800-327-8633 (FAST MED)

Recommended use of the chemical and restrictions on use

Recommended use : Herbicide

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
glyphosate-potassium	glyphosate-potassium	39600-42-5	25.0984

S-metolachlor	S-metolachlor	87392-12-9	20.4918
p-toluenesulphonic acid (containing a maximum of 5 % H2SO4)	p-toluenesulphonic acid (containing a maximum of 5 % H2SO4)	104-15-4	>= 1 - < 5 *
mesotrione (ISO)	mesotrione (ISO)	104206-82-8	2.0492
triethylamine	triethylamine	121-44-8	>= 0 - < 0.1 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. 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.

Most important symptoms and effects, both acute and delayed : Nonspecific
No symptoms known or expected.

Notes to physician : There is no specific antidote available.
Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

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 media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during fire-fighting	:	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.
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.
Special protective equipment for firefighters	:	Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.
Conditions for safe storage	:	No special storage conditions required. 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
S-metolachlor	87392-12-9	TWA	5 mg/m3	Syngenta
mesotrione (ISO)	104206-82-8	TWA	5 mg/m3	Syngenta
triethylamine	121-44-8	TWA	1 ppm 4.1 mg/m3	CA AB OEL
		STEL	3 ppm 12 mg/m3	CA AB OEL
		TWA	0.5 ppm	CA BC OEL
		STEL	1 ppm	CA BC OEL
		TWAEV	0.5 ppm	CA QC OEL
		STEV	1 ppm	CA QC OEL
		TWA	0.5 ppm	ACGIH
		STEL	1 ppm	ACGIH

Engineering measures : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

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.
Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection

Remarks : No special protective equipment required.

Eye protection : 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.

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

Appearance	:	liquid
Colour	:	brown
Odour	:	sweet
Odour Threshold	:	No data available
pH	:	4.2 Concentration: 1 %w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Method: method not specified does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
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
Density	:	1.22 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available

Auto-ignition temperature	:	630 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Particle size	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No decomposition if used as directed.
Incompatible materials	:	None known.
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat, female): > 5,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 1.20 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Highest attainable concentration Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat, male and female): > 6,147 mg/kg Remarks: Based on data from similar materials

Components:

glyphosate-potassium:

Acute oral toxicity : LD50 (Rat, female): Calculated 2,111 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): Calculated > 4.95 mg/l
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): Calculated > 2,400 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

S-metolachlor:

Acute oral toxicity : LD50 (Rat, male and female): 2,672 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.91 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

mesotrione (ISO):

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.75 mg/l
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

triethylamine:

Acute oral toxicity : LD50 (Rat): 730 mg/kg

Acute inhalation toxicity : LC50 (Rat): 7.22 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rat): 580 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

Components:

glyphosate-potassium:

Species : Rabbit
Result : No skin irritation

S-metolachlor:

Species : Rabbit
Result : No skin irritation

p-toluenesulphonic acid (containing a maximum of 5 % H2SO4):

Result : Irritating to skin.

mesotrione (ISO):

Species : Rabbit
Result : No skin irritation

triethylamine:

Species : Rabbit
Result : Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Components:

glyphosate-potassium:

Species : Rabbit
Result : No eye irritation

S-metolachlor:

Species : Rabbit
Result : No eye irritation

p-toluenesulphonic acid (containing a maximum of 5 % H2SO4):

Result : Eye irritation

mesotrione (ISO):

Species : Rabbit
Result : No eye irritation

triethylamine:

Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.
Remarks : Based on data from similar materials

Components:

glyphosate-potassium:

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

S-metolachlor:

Species : Guinea pig
Result : The product is a skin sensitiser, sub-category 1B.

mesotrione (ISO):

Species : Guinea pig
Result : Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

glyphosate-potassium:

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

S-metolachlor:

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

mesotrione (ISO):

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

triethylamine:

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

Carcinogenicity

Components:

glyphosate-potassium:

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

S-metolachlor:

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

mesotrione (ISO):

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

Reproductive toxicity

Components:

glyphosate-potassium:

Reproductive toxicity - Assessment : No toxicity to reproduction

S-metolachlor:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

mesotrione (ISO):

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

triethylamine:

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

p-toluenesulphonic acid (containing a maximum of 5 % H2SO4):

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

triethylamine:

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

STOT - repeated exposure

Components:

glyphosate-potassium:

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

S-metolachlor:

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

mesotrione (ISO):

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 54 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 69 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.18 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.032 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

ErC50 (Lemna gibba (gibbous duckweed)): 0.33 mg/l
Remarks: Based on data from similar materials

NOEC (Lemna gibba (gibbous duckweed)): 0.032 mg/l
End point: Frond growth
Remarks: Based on data from similar materials

Components:

glyphosate-potassium:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): Calculated > 1,511 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): Calculated > 1,227 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): Calculated 66 mg/l Exposure time: 72 h

S-metolachlor:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1.23 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Americamysis): 1.4 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.077 mg/l Exposure time: 96 h NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.016 mg/l End point: Growth rate Exposure time: 96 h EC50 (Lemna gibba (gibbous duckweed)): 0.023 mg/l Exposure time: 14 d NOEC (Lemna gibba (gibbous duckweed)): 0.0076 mg/l Exposure time: 14 d
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.03 mg/l Exposure time: 35 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Americamysis): 0.13 mg/l Exposure time: 28 d
M-Factor (Chronic aquatic toxicity)	:	10

mesotrione (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l Exposure time: 96 h LC50 (Cyprinus carpio (Carp)): > 97.1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 900 mg/l Exposure time: 48 h
Toxicity to algae/aquatic	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 12

plants		mg/l Exposure time: 96 h NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.75 mg/l End point: Growth rate Exposure time: 96 h ErC50 (Lemna gibba (gibbous duckweed)): 0.0301 mg/l Exposure time: 7 d EC10 (Lemna gibba (gibbous duckweed)): 0.00187 mg/l End point: Growth rate Exposure time: 7 d
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 12.5 mg/l Exposure time: 36 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 180 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	10

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.

triethylamine:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 36 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 9.8 mg/l Exposure time: 72 h

Persistence and degradability

Components:

S-metolachlor:

Biodegradability	:	Result: Not readily biodegradable.
Stability in water	:	Degradation half life: 53 - 147 d Remarks: Product is not persistent.

mesotrione (ISO):

Stability in water	:	Degradation half life: > 30 d (25 °C) Remarks: Persistent in water.

triethylamine:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Components:

S-metolachlor:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 3.05 (25 °C)

mesotrione (ISO):

Bioaccumulation : Remarks: Low bioaccumulation potential.

Mobility in soil

Components:

S-metolachlor:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 12 - 46 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

mesotrione (ISO):

Distribution among environmental compartments : Remarks: Highly mobile in soils

Stability in soil : Dissipation time: 6 - 105 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

Other adverse effects

Components:

mesotrione (ISO):

Results of PBT and vPvB 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).

triethylamine:

Results of PBT and vPvB 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).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Refer to the product label for specific disposal/recycling information

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 : Refer to the product label for specific disposal/recycling information

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.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (S-METOLACHLOR, MESOTRIONE)
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

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

IMDG-Code

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

Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

TDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (S-METOLACHLOR, MESOTRIONE)
Class	:	9
Packing group	:	III
Labels	:	9
ERG Code	:	171
Marine pollutant	:	yes(S-METOLACHLOR, MESOTRIONE)
Remarks	:	Class 9 Exemption from Part 3, Documentation, and Part 4, Dangerous Goods Safety Marks, if transported solely on land by road vehicle or railway vehicle. 1.45.1. SOR/2008-34

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

Read the label, authorised under the Pest Control Products Act, prior to using or handling the pest control product
There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.
This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:
Warning, contains the allergen 1,2-benzisothiazolin-3-one and 2-bromo-2-nitropropane-1,3-diol
Warning, contains the allergens 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one
Caution
Skull and crossbones
poison
Potential skin sensitiser

NPRI Components	:	sulphuric acid Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified xylene acetonitrile triethylamine naphthalene

formaldehyde

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

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

mesotrione (ISO)

S-metolachlor

glyphosate-potassium

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
Syngenta	:	Syngenta Occupational Exposure Limit
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
Syngenta / 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 Con-

centration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date	:	04/21/2023
Date format	:	mm/dd/yyyy

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 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.

CA / EN