

**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

#### **SECTION 1. IDENTIFICATION**

Product name : TOPAMAX

Substance name : TOPAMAX Sprinkle Capsules 25 mg

Topiramate Sprinkles 25mg

Manufacturer or supplier's details

Company name of supplier : Janssen Pharmaceuticals, Inc.

Address : 1125 Trenton-Harbourton Rd

Titusville NJ 08560

USA

Telephone : +16097302000

E-mail address of person responsible for the SDS

SDSJanssen@its.jnj.com

Emergency telephone

number

CHEMTREC US: 1-800-424-9300

CHEMTREC International: +1 703-741-5970

#### Recommended use of the chemical and restrictions on use

Recommended use : Finished Pharmaceutical Product

Pharmacotherapeutic group: Antiepileptics

This SDS is only intended for occupational use and not for consumer use (see patient packaging insert for consumer use). This SDS is written to provide environmental, health and safety information for personnel that will be handling this finished pharmaceutical product. For health and safety information during manufacturing of this product we refer to

the appropriate SDS for each component.

This dosage form is exempt from the requirements of the OSHA Hazard Communication Standard (US OSHA Standard

29 CFR Part 1910.1200).

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive toxicity : Category 2

**GHS** label elements



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

Hazard pictograms

Signal word : Warning

Hazard statements : H361d Suspected of damaging the unborn child.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

### **Additional Labelling**

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:  $11.846\,\%$ 

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 11.846%

#### Other hazards

Refer to the pharmacotherapeutic group (section 1.2) and the patient packaging insert to evaluate the possible workplace hazards when this Finished Pharmaceutical Product is accidently leaking, broken or crushed.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Solid

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
alpha-D-Glucopyranoside, beta-D-	57-50-1	>= 50 - < 70
fructofuranosyl		
TOPIRAMATE	97240-79-4	>= 10 - < 20
Starch	9005-25-8	>= 10 - < 20



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

TITANDIOXIDE | 13463-67-7 | >= 0.1 - < 1

Actual concentration is withheld as a trade secret

#### **SECTION 4. FIRST AID MEASURES**

If inhaled : If breathed in, move person into fresh air.

Consult a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.

Wash off with soap and water.
If symptoms persist, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 5 minutes. Remove contact lenses.

If eye irritation persists, consult a specialist.

If swallowed, rinse mouth with water (only if the person is

conscious).

Call a physician immediately.

Most important symptoms and effects, both acute and

delayed

Consult the patient packaging insert for more information

about this Finished Pharmaceutical Product.

Abdominal pain

anorexia
Disorientation
Dizziness
insomnia
Tremors
Blurred vision
Nausea
Diarrhoea
constipation
dry mouth

stomach discomfort

Spasm Fatigue Cough

nasopharyngitis weight decrease

Notes to physician : Treat symptomatically.

Consult the patient packaging insert for more information

about this Finished Pharmaceutical Product.

#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Hazardous combustion

products

: No hazardous combustion products are known



**TOPAMAX** 

Version **Revision Date:** SDS Number: Date of last issue: 2022/10/30 100000014551 3.0 2022/11/08 Date of first issue: 2018/04/12

Further information No information available.

for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

In the event of an accidental release the emergency response team must respond based on a risk assessment and use

personal protective equipment as appropriate.

**Environmental precautions** Should not be released into the environment.

Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up Large spills + Small spills: Keep in suitable, closed containers for disposal. Treat recovered material as described in the

section "Disposal considerations".

Large spills: Sweep up (intact) or vacuum with HEPA filter (broken or crushed) or via wet cleaning into suitable

containers for disposal. Pick up and arrange without creating

dust. Keep in properly labelled containers.

Small spills: Moisten a towel, cover the spill, pick up the spill

or use HEPA vacuum.

### **SECTION 7. HANDLING AND STORAGE**

Advice on protection against

fire and explosion

No data available

Advice on safe handling To avoid thermal decomposition, do not overheat.

> Avoid inhalation, ingestion and contact with skin and eyes. Do not break, crush or spill this Finished Pharmaceutical

Product.

Use personal protective equipment as required.

To maintain product quality, do not store in heat or direct Conditions for safe storage

sunlight.

Store in original container.

Keep containers tightly closed in a dry, cool and well-

ventilated place.

Keep away from heat and sources of ignition.

Keep locked up.

Recommended storage

temperature

< 77 °F / < 25 °C

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters



# **TOPAMAX**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis	
alpha-D-Glucopyranoside, beta-D-fructofuranosyl	57-50-1	TWA	10 mg/m3	ACGIH	
,		TWA (Respirable)	5 mg/m3	NIOSH REL	
		TWA (total)	10 mg/m3	NIOSH REL	
		TWA (total dust)	15 mg/m3	OSHA Z-1	
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1	
		TWA (Total dust)	15 mg/m3	OSHA P0	
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0	
TOPIRAMATE	97240-79-4	TWA	0.120 mg/m3	J&J OEL/PBOEL HHC	
		PBOEL-HHC	1 B	J&J OEL/PBOEL HHC	
	Further information: J&J has a hazard banding notation: PBOEL HHC. This substance is classified by J&J as being PBOEL HHC 1B., Notation REPRO: has the potential to have adverse effects on reproduction and fetal development				
Starch	9005-25-8		10 mg/m3	ACGIH	
		TWA	10 mg/m3	ACGIH	
		TWA (Respirable)	5 mg/m3	NIOSH REL	
		TWA (total)	10 mg/m3	NIOSH REL	
		TWA (total dust)	15 mg/m3	OSHA Z-1	
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1	
		TWA (Total dust)	15 mg/m3	OSHA P0	
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0	
TITANDIOXIDE	13463-67-7	TWA	2.4 mg/m3	J&J OEL/PBOEL HHC	
		TWA	10 mg/m3	ACGIH	
		TWA (total dust)	15 mg/m3	OSHA Z-1	
		TWA (Total dust)	10 mg/m3	OSHA P0	



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

TWA (Respirable particulate matter)	0.2 mg/m3 (Titanium dioxide)	ACGIH
TWA (Respirable particulate matter)	2.5 mg/m3 (Titanium dioxide)	ACGIH

**Engineering measures** : All personal protective equipment should be based on a risk

assessment. Consult a Environment Health Safety expert if

necessary.

If this product is processed not in accordance with the prescribed use, contact the Industrial Hygiene / Environment

Health Safety Expert to assess the situation.

Validated Industrial Hygiene Analytical methods are

developed to monitor and quantify inhalable exposure to the Active Pharmaceutical Ingredient. For more information contact Maxxam Analytics (www.maxxamlabs.com) or the Laboratory of Occupational and Environmental Hygiene

(www.lamh.be).

#### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

Remarks : Disposable gloves

Eye protection : No special precautions required.

Skin and body protection : closed work clothing

Protective measures : The type of protective equipment must be selected based on

the Environmental Health and Safety risk assessment. Consult a Environmental Health and Safety expert if

necessary.

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : solid

Colour : white

Odour : No data available

Odour Threshold : No data available



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

pH : No data available

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) : No information available.

Self-ignition : 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 density : No data available

Density : No data available

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Explosive properties : No data available

Oxidizing properties : 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 : To avoid thermal decomposition, do not overheat.



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

Heat, flames and sparks. Exposure to moisture

Incompatible materials : None known.

Hazardous decomposition

products

None known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### **Acute toxicity**

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Components:** 

**TOPIRAMATE:** 

Acute oral toxicity : LD50 (Rat): 2,436 mg/kg

Acute inhalation toxicity : Remarks: May be harmful if inhaled.

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation

**Components:** 

**TOPIRAMATE:** 

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

**Components:** 

**TOPIRAMATE:** 

Species : Rabbit

Result : No eye irritation

Starch:

Remarks : Contact with eyes may cause irritation.

Respiratory or skin sensitisation

**Components:** 

**TOPIRAMATE:** 

Result : Not a sensitizer



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

#### Germ cell mutagenicity

**Components:** 

**TOPIRAMATE:** 

Genotoxicity in vitro : Test Type: Ames test

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Test Type: A mouse lymphoma test

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Rat Result: negative

Carcinogenicity

**Components:** 

**TOPIRAMATE:** 

Species : Rat
Application Route : Oral
Exposure time : 2 years

Dose : 120 mg/kg/day

Remarks : no

carcinogenic effects

IARC Group 2B: Possibly carcinogenic to humans

13463-67-7 TITANDIOXIDE

**OSHA**No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

**Components:** 

**TOPIRAMATE:** 



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

Effects on foetal : Species: Rabbit development : Remarks: positive

Species: Rat Remarks: positive

Species: Mouse Remarks: positive

Reproductive toxicity -

Assessment

Some evidence of adverse effects on development, based on

animal experiments.

Teratogenicity - Assessment : Limited evidence of adverse effects on development in animal

studies and/ or human studies.

STOT - single exposure

**Components:** 

**TOPIRAMATE:** 

Remarks : No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

**Components:** 

**TOPIRAMATE:** 

Species : Rat

NOAEL : 10 mg/kg

Exposure time : 3 months

Species : Dog NOAEL : 10 mg/kg Exposure time : 3 months

Species : Dog NOAEL : 10 mg/kg Exposure time : 12 months

**Aspiration toxicity** 

No data available

**Experience with human exposure** 

No data available

Toxicology, Metabolism, Distribution

No data available

**Neurological effects** 

No data available



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

**Further information** 

**Components:** 

Starch:

Remarks : Health injuries are not known or expected under normal use.

Other health hazards

No data available

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 

**Components:** 

**TOPIRAMATE:** 

Toxicity to fish : NOEC (Lepomis macrochirus (Bluegill sunfish)): < 75 mg/l

Method: FDA 4.11

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 2,400 mg/l

Exposure time: 96 h Method: FDA 4.11

Toxicity to daphnia and other :

aquatic invertebrates

NOEC (Daphnia (water flea)): 1,000 mg/l

Method: FDA 4.08

EC50 (Daphnia (water flea)): 1,000 mg/l

Method: FDA 4.08

Toxicity to algae/aquatic

plants

EbC50 (Pseudokirchneriella subcapitata (green algae)): > 93

mg/l

Test Type: Cell multiplication inhibition test

Method: OECD Test Guideline 201

NOECb (Pseudokirchneriella subcapitata (green algae)): 93

mg/l

Test Type: Cell multiplication inhibition test

Method: OECD Test Guideline 201

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 93

mg/l

Test Type: Growth inhibition Method: OECD Test Guideline 201

NOECr (Pseudokirchneriella subcapitata (green algae)): 93

mg/l

Test Type: Growth inhibition Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC (activated sludge): >= 1,000 mg/l

Exposure time: 3 h



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

Method: OECD Test Guideline 209

EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

EC50: > 100 mg/l

Test Type: Growth inhibition

Method: similar to OECD Test Guideline 209

MIC: > 10 mg/l

Test Type: Growth inhibition

Method: similar to OECD Test Guideline 209

### Persistence and degradability

**Components:** 

**TOPIRAMATE:** 

Biodegradability : Remarks: No data available

Starch:

Biodegradability : Result: Readily biodegradable.

**Bioaccumulative potential** 

**Components:** 

**TOPIRAMATE:** 

Bioaccumulation : Remarks: No data available

Partition coefficient: n-

octanol/water

Remarks: No data available

TITANDIOXIDE:

Partition coefficient: n-

octanol/water

Remarks: No data available

Mobility in soil

**Components:** 

**TOPIRAMATE:** 

Distribution among : log Koc: 2.1

environmental compartments Method: OECD Test Guideline 121

Remarks: high mobility



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

#### Other adverse effects

**Components:** 

**TOPIRAMATE:** 

Results of PBT and vPvB

assessment

No information available.

Additional ecological

information

No data available No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : In accordance with National, Federal, State and Local

regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

#### **SECTION 14. TRANSPORT INFORMATION**

#### International Regulations

#### **UNRTDG**

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

### **National Regulations**

### **49 CFR**

Not regulated as a dangerous good

### **SECTION 15. REGULATORY INFORMATION**

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



$T \cap$	ם	Λ	N/	<b>A</b>	V
TC	"	А	IVI	А	X

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

#### **US State Regulations**

#### **Massachusetts Right To Know**

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1 Starch 9005-25-8

#### **Massachusetts Right To Know**

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1 Starch 9005-25-8

#### Pennsylvania Right To Know

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1
TOPIRAMATE 97240-79-4
CROSPOVIDONE 9003-39-8
Starch 9005-25-8
CELLULOSEACETAAT 9004-35-7

#### Pennsylvania Right To Know

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1
TOPIRAMATE 97240-79-4
CROSPOVIDONE 9003-39-8
Starch 9005-25-8
CELLULOSEACETAAT 9004-35-7

#### **Maine Chemicals of High Concern**

Product does not contain any listed chemicals

### **Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

#### **Washington Chemicals of High Concern**

Product does not contain any listed chemicals

#### **New Jersey Right To Know**

alpha-D-Glucopyranoside, beta-D-fructofuranosyl
TOPIRAMATE
CROSPOVIDONE
9003-39-8
Starch
CELLULOSEACETAAT
57-50-1
97240-79-4
9003-39-8
9005-25-8

#### **New York City Hazardous Substances**

TITANDIOXIDE 13463-67-7

### **New York City Hazardous Substances**

TITANDIOXIDE 13463-67-7

### California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer. WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product can expose you to chemicals including TITANDIOXIDE, which is/are known to the State of California to cause cancer, and

TOPIRAMATE, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

**California List of Hazardous Substances** 

CROSPOVIDONE 9003-39-8

**California List of Hazardous Substances** 

CROSPOVIDONE 9003-39-8

California Permissible Exposure Limits for Chemical Contaminants

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1 Starch 9005-25-8

**California Permissible Exposure Limits for Chemical Contaminants** 

alpha-D-Glucopyranoside, beta-D-fructofuranosyl 57-50-1 Starch 9005-25-8

Other regulations

This product is not subject to TSCA and TSCA 12(b) Export notification because Food, Drugs and cosmetic products are exempt.

Restricted to professional users.

#### **SECTION 16. OTHER INFORMATION**

#### Full text of other abbreviations

ACGIH : US. ACGIH Threshold Limit Values

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

J&J OEL/PBOEL HHC : J&J OEL/PBOEL HHC

NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1

Limits for Air Contaminants

ACGIH / TWA : Time weighted average
ACGIH / TWA : 8-hour, time-weighted average
J&J OEL/PBOEL HHC / TWA : Time weighted average

J&J OEL/PBOEL HHC / : PBOEL-HHC

**PBOEL-HHC** 

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and



**TOPAMAX** 

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 2022/10/30

 3.0
 2022/11/08
 100000014551
 Date of first issue: 2018/04/12

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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Revision Date : 2022/11/08

#### **Date and Number Formats**

This document uses the following notation for printing dates and numbers:

**Date:** Dec 31th, 2012 as 2012/12/31

**Numbers:** 123456,78 as 123,456.78

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.

US / EN