• SAFETY DATA SHEET

Version 6.8
Revision Date 11/11/2025
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SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : Cholera Toxin B subunit

Product Number : C9903
Brand : Sigma
CAS-No. : 131096-89-4

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2. HAZARDS IDENTIFICATION

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

Hazards for the product as supplied

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation)	:	Category 4
Acute toxicity (Dermal)	:	Category 4
Specific target organ toxicity - repeated exposure (Oral)	:	Category 2 (Brain)
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2 (Respiratory Tract)
Short-term (acute) aquatic hazard	:	Category 3
Long-term (chronic) aquatic hazard	:	Category 3

Other hazards

None known.

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H373 May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of

water. Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.

Disposal:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

CAS-No. : 131096-89-4

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Ethylenedinitrilotetraacetic acid disodium salt	139-33-3*	>= 0.5 - <= 1.5	TSC
sodium azide	26628-22-8*	>= 0.5 - <= 1.5	TSC

* Indicates that the identifier is a CAS No.
TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Show this safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact : After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed : After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Protection of first-aiders	:	For personal protection see section 8.
Notes to physician	:	No data available

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	:	For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	:	Mixture with combustible ingredients. Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx) Hydrogen chloride gas Sodium oxides
Specific extinguishing methods	:	No data available
Further information	:	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	:	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.
Environmental precautions	:	Do not let product enter drains.
Methods and materials for containment and cleaning up	:	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Further information on storage conditions	:	Tightly closed. Dry.
Storage class	:	11, Combustible Solids
Recommended storage temperature	:	36 - 46 °F / 2 - 8 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sodium azide	26628-22-8	C	0.29 mg/m3 (Sodium azide)	ACGIH
		C (Vapour)	0.11 ppm (Hydrazoic acid)	ACGIH
		C	0.1 ppm (HN3)	NIOSH REL
		C	0.3 mg/m3 (Sodium azide)	NIOSH REL

Engineering measures : No data available

Personal protective equipment

Respiratory protection	:	required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type:	:	Filter type P2

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hand protection

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm
Protective index	:	Full contact
Manufacturer	:	KCL 741 Dermatril® L

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm
Protective index	:	Splash contact
Manufacturer	:	KCL 741 Dermatril® L

Remarks	:	Handle with impervious gloves. This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Eye protection	:	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Skin and body protection	:	protective clothing
Protective measures	:	Use controls and personal protection appropriate for biohazardous infectious materials, as described in the

Canadian Biosafety Standards and Guidelines (current edition).

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder, (lyophilised)
Color	:	No data available
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Burning rate	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available

Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Explosive properties	:	Not classified as explosive.
Oxidizing properties	:	none
Particle characteristics Particle size	: :	 No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	:	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	:	No data available
Conditions to avoid	:	no information available
Incompatible materials	:	Halogenated hydrocarbon Acids Bases Oxidizing agents Strong oxidizing agents Metals Acid chlorides
Hazardous decomposition products	:	In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture

Acute toxicity
Acute toxicity estimate Oral - 1,840 mg/kg
(Calculation method)
Acute toxicity estimate Inhalation - 4 h - 4.78 mg/l - dust/mist(Calculation method)

Acute toxicity estimate Dermal - 2,000 mg/kg
(Calculation method)

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Mixture may cause damage to organs through prolonged or repeated exposure.
- Brain
Mixture may cause damage to organs through prolonged or repeated exposure.
- Respiratory Tract

Aspiration hazard
No data available

11.2 Additional Information

Sodium azide/ hydrazoic acid causes a profound lowering of blood pressure and inhibits cellular respiration., Laboratory experiments in animals have shown sodium azide to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, and hepatic and cerebral effects.

Infectious agents: Appropriate safety procedure must be followed for infectious agents as found in: *Laboratory Biosafety Guidelines(3rd Ed., 2004) and/or the Containment Standards for Veterinary Facilities (1st Ed., 1996).*

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

Ethylenedinitrilotetraacetic acid disodium salt

Acute toxicity
LD50 Oral - Rat - male and female - 2,800 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
Remarks: (ECHA)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: negative
(ECHA)
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Remarks: The value is given in analogy to the following substances:
Ethylenedinitrilotetraacetic acid trisodium salt
Test Type: Ames test
Result: negative
Remarks: The value is given in analogy to the following substances:
Ethylenedinitrilotetraacetic acid trisodium salt
(ECHA)
Method: OECD Test Guideline 474
Species: Mouse - male - Bone marrow
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Inhalation - May cause damage to organs through prolonged or repeated exposure.
- Respiratory Tract
Inhalation - Lungs, larynx
Inhalation - larynx

Aspiration hazard
No data available

sodium azide

Acute toxicity
LD50 Oral - Rat - 27 mg/kg
Remarks: (RTECS)
LC50 Inhalation - Rat - male and female - 4 h - 0.054 - 0.52 mg/l - dust/mist (US-EPA)
LD50 Dermal - Rabbit - 20 mg/kg
Remarks: (RTECS)
No data available

Skin corrosion/irritation
Skin - In vitro study
Result: No skin irritation
(OECD Test Guideline 439)

Serious eye damage/eye irritation
Eyes - Bovine cornea
Result: No eye irritation - 4 h
(OECD Test Guideline 437)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: negative
Test Type: unscheduled DNA synthesis assay
Test system: Chinese hamster lung cells
Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Oral - May cause damage to organs through prolonged or repeated exposure.
- Brain

Aspiration hazard
No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Ethylenedinitrilotetraacetic acid disodium salt:

Toxicity to fish	:	LC100 (Oncorhynchus mykiss (rainbow trout)): 860 mg/l Exposure time: 24 h Test Type: static test Remarks: (ECHA) LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes Remarks: (ECHA) The value is given in analogy to the following substances: The value is given in analogy to the following substances: Sodium feredetate
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 140 mg/l Exposure time: 48 h Test Type: static test Method: DIN 38412 Remarks: (ECHA) NOEC (Daphnia magna (Water flea)): 25 mg/l Exposure time: 21 d Remarks: (ECHA)
Toxicity to algae/aquatic plants	:	(Pseudokirchneriella subcapitata (green algae)): > 60 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Analytical monitoring: yes

Method: OECD Test Guideline 201
GLP: yes
Remarks: (ECHA)
The value is given in analogy to the following substances:
The value is given in analogy to the following substances: Sodium feredetate

Toxicity to fish (Chronic toxicity)	:	NOEC (Danio rerio (zebra fish)): >= 25.7 mg/l Exposure time: 35 d Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 210 GLP: yes Remarks: (in analogy to similar products)
Toxicity to microorganisms	:	NOEC (activated sludge): > 640 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: yes Remarks: (ECHA) The value is given in analogy to the following substances: The value is given in analogy to the following substances: Sodium feredetate

sodium azide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2.75 mg/l Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata): 0.35 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC10 (activated sludge): 79.3 mg/l Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209

GLP: yes

Persistence and degradability

Components:

Ethylenedinitrilotetraacetic acid disodium salt:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 2 % Exposure time: 28 d Method: OECD Test Guideline 301D GLP: yes Remarks: The value is given in analogy to the following substances:

sodium azide:

Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

Ethylenedinitrilotetraacetic acid disodium salt:

Bioaccumulation	:	Species: Lepomis macrochirus Bioconcentration factor (BCF): 1.8 Exposure time: 28 d Temperature: 70 °F / 21 °C Concentration: ca. 0.08 mg/l Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid,Tetrasodiumsalt
Partition coefficient: n-octanol/water	:	log Pow: -4.3 (77 °F / 25 °C) Method: (experimental)

sodium azide:

Partition coefficient: n-octanol/water	:	Remarks: Not applicable for inorganic substances

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section

602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Components:

Ethylenedinitrilotetraacetic acid disodium salt:

Results of PBT and vPvB assessment	:	Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

sodium azide:

Results of PBT and vPvB assessment	:	PBT/vPvB: Not applicable for inorganic substances

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to IMO instruments
Not applicable for product as supplied.

National Regulations

49 CFR Road
Not regulated as a dangerous good

Poison Inhalation Hazard	:	No

Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
sodium azide	26628-22-8	500

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

sodium azide	26628-22-8	>= 1 - < 5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

sodium chloride	7647-14-5
sodium azide	26628-22-8

Pennsylvania Right To Know

sodium azide	26628-22-8

Maine Chemicals of High Concern

sodium chloride	7647-14-5

Vermont Chemicals of High Concern

sodium chloride	7647-14-5

Washington Chemicals of High Concern

sodium chloride	7647-14-5

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

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
ACGIH / C	:	Ceiling limit
NIOSH REL / C	:	Ceiling value not be exceeded at any time.

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 Harmonised 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 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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