

SAFETY DATA SHEET

Version 6.14 Revision Date 06/25/2025 Print Date 06/26/2025

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : (S)-(-)-N-(Trifluoroacetyl)pyrrolidine-2-

carbonyl chlorid e solution

Product Number : 248509 Brand : Aldrich

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : After February 3, 2025, this chemical substance (as defined in

TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or

reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or

mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space

vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to

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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

: Sigma-Aldrich Inc. Company

3050 SPRUCE ST ST. LOUIS MO 63103 UNITED STATES

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

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)

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

: Category 2 Carcinogenicity

Specific target organ

toxicity - single exposure

: Category 3 (Central nervous system)

Short-term (acute)

aquatic hazard

: Category 2

Long-term (chronic)

aquatic hazard

: Category 2

Other hazards

None known.

GHS label elements

Hazard pictograms







Signal Word : Warning

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Hazard Statements : H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have

been read and understood.

P261 Avoid breathing mist or vapours.

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/ eye

protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and

water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a

POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical

advice/ attention.

P332 + P313 If skin irritation occurs: Get medical

advice/ attention.

P337 + P313 If eye irritation persists: Get medical

advice/ attention.

P362 Take off contaminated clothing and wash before

reuse.

P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep

container tightly closed.

P405 Store locked up.

Disposal:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance / Mixture : Mixture

Components

| Chemical name | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|---|----------------------|-----------------------|-----------------|
| Dichloromethane | 75-09-2* | >= 80 - <= 100 | TSC |
| (S)-(-)-N- (Trifluoroacetyl)prolyl chloride | 36724-68-2* | >= 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. 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.

Call in ophthalmologist. Remove contact lenses.

If swallowed : After swallowing: immediately make victim drink

water (two glasses at most).

Consult a physician.

Most important symptoms and effects.

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

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing

media

: For this substance/mixture no limitations of

extinguishing agents are given.

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Specific hazards during fire fighting

: Not combustible.

Ambient fire may liberate hazardous vapours.

Hazardous combustion products

: Carbon oxides

Nitrogen oxides (NOx)

Hydrogen chloride gas

Hydrogen fluoride

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: Do not breathe vapours, aerosols.

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).

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Take up with liquid-absorbent material (e.g. Chemizorb ${\mathbb R}$). Dispose of properly. Clean up affected area.

SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Advice on safe handling : Work under hood. Do not inhale substance/mixture.

Avoid generation of vapours/aerosols.

Further information on

storage conditions

: Tightly closed.

Keep in a well-ventilated place.

Keep locked up or in an area accessible only to

qualified or authorised persons.

Storage class : 6.1D, Non-combustible, acute toxic Cat.3 / toxic

hazardous materials or hazardous materials causing

chronic effects

Recommended storage

temperature

: 36 - 46 °F / 2 - 8 °C

Further information on

storage stability

: Moisture sensitive.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| • | • | | | |
|-----------------|---------|-------------------------------------|--|--------------|
| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
| Dichloromethane | 75-09-2 | TWA | 50 ppm | ACGIH |
| | | PEL | 25 ppm | OSHA CARC |
| | | STEL | 125 ppm | OSHA CARC |
| | | ECEL-TWA | 2 ppm | TSCA ECEL |
| | | EPA STEL | 16 ppm 57 mg/m3 | TSCA ECEL |

Biological occupational exposure limits

| Diological occupational exposure imme | | | | | | |
|---------------------------------------|---------|------------------|------------|--------------|------------|--------------|
| Components | CAS-No. | Control | Biological | Samplin | Permissibl | Basis |
| | | parameter | specimen | g time | е | |
| | | S | | | concentrat | |
| | | | | | ion | |
| Dichloromethane | 75-09-2 | Dichlorom ethane | Urine | End of shift | 0.3 mg/l | ACGIH BEI |

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| | soon as | |
|--|----------|--|
| | possible | |
| | after | |
| | exposur | |
| | e | |
| | ceases) | |

Engineering measures : No data available

Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory

protection are based on the following standards: $\ensuremath{\mathsf{DIN}}$

EN 143, DIN 14387 and other accompanying

standards relating to the used respiratory protection

system.

Recommended Filter

type:

: Filter type ABEK

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

Remarks : required

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

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 : liquid

Color : No data available

Odor : No data available

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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) : The product is not flammable.

Burning rate : No data available

Self-ignition : Not applicable

Upper explosion limit / Upper flammability limit

: Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Vapor pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1.000 g/cm3

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : Not applicable

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

Molecular weight : 229.58 g/mol

Particle characteristics

Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No data available

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 : Bases

Alkali metals

Strong acids and strong bases

Strong oxidizing agents

Amines

Vinyl compounds

Aluminum Magnesium

products

Hazardous decomposition : In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral: No data available

Acute toxicity estimate Oral - 1,776 mg/kg

(Calculation method)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and

gastrointestinal tract.

Symptoms: Possible symptoms:, mucosal irritations

Acute toxicity estimate Dermal - 2,543 mg/kg

(Calculation method)

Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye irritation.



Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Evidence of a carcinogenic effect.

IARC: 2A - Group 2A: Probably carcinogenic to humans (Dichloromethane)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Dichloromethane)

OSHA: OSHA specifically regulated carcinogen (Dichloromethane)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture may cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence

Components

Dichloromethane

Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapour

Remarks: (ECHA)

Symptoms: Possible damages:, mucosal irritations LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h

(OECD Test Guideline 404)

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation Remarks: (ECHA)

Remarks: Risk of corneal clouding.

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: positive Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative **Carcinogenicity**

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

(S)-(-)-N-(Trifluoroacetyl)prolyl chloride

Acute toxicity

Oral: No data available LD50 Oral - 100 mg/kg Inhalation: No data available Dermal: No data available

No data available

Skin corrosion/irritation Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

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Millipore iiGMa

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Dichloromethane:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)):

193.00 mg/l

End point: mortality Exposure time: 96 h

Test Type: flow-through test Analytical monitoring: yes

Remarks: (ECHA)

Toxicity to daphnia and

other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 27 mg/l

End point: mortality Exposure time: 48 h Test Type: static test Method: US-EPA

Toxicity to fish (Chronic

toxicity)

: LC50 (Pimephales promelas (fathead minnow)): 471

ma/l

End point: mortality Exposure time: 8 d

Test Type: flow-through test Analytical monitoring: yes

Remarks: (ECHA)

Toxicity to : EC50 (activated sludge): 2,590 mg/l

Exposure time: 40 min microorganisms

Test Type: static test

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Method: OECD Test Guideline 209

(S)-(-)-N-(Trifluoroacetyl)prolyl chloride:

Toxicity to fish : Remarks: No data available

LC50 (Pimephales promelas (fathead minnow)): 0.024

mq/l

Exposure time: 96.0 h

Remarks: The preceding data, or interpretation of data, was determined using Quantitative Structure

Activity Relationship (QSAR) modeling.

LC50 : 0.1 mg/l Exposure time: 96.0 h

Persistence and degradability

Components:

Dichloromethane:

Biodegradability : aerobic

Inoculum: activated sludge, non-adapted

Concentration: 5 mg/l

Result: Readily biodegradable.

Biodegradation: 68 % Exposure time: 28 d

Method: OECD Test Guideline 301D

GLP: yes

(S)-(-)-N-(Trifluoroacetyl)prolyl chloride:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Components:

Dichloromethane:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 2 - 5.4

Exposure time: 6 Weeks Concentration: 250 µg/l

Method: OECD Test Guideline 305

GLP: yes

Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 6 - 40

Exposure time: 6 Weeks Concentration: 25 µg/l

Method: OECD Test Guideline 305

GLP: yes

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Partition coefficient: n-

: log Pow: 1.25 (68 °F / 20 °C)

octanol/water

Method: (experimental)

Remarks: Bioaccumulation is not expected.

(S)-(-)-N-(Trifluoroacetyl)prolyl chloride:

Bioaccumulation : Remarks: No data available

pH: 7

Mobility in soil

Components:

(S)-(-)-N-(Trifluoroacetyl)prolyl chloride:

Stability in soil : Remarks: No data available

Other adverse effects

Components:

Dichloromethane:

Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT). Substance is not very persistent and very

bioaccumulative (vPvB).

: Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex

XIII.

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

UN/ID No. : UN 1593

Proper shipping name : Dichloromethane solution

Class : 6.1 Packing group : III

Labels : Division 6.1 - Toxic substances

Packing instruction (cargo: 663

aircraft)

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Packing instruction : 655

(passenger aircraft)

IMDG-Code

UN number : UN 1593

Proper shipping name : DICHLOROMETHANE SOLUTION

Class : 6.1
Packing group : III
Labels : 6.1
EmS Code : F-A, S-A
Marine pollutant : no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR Road

UN/ID/NA number : UN 1593

Proper shipping name : Dichloromethane SOLUTION

Class : 6.1 Packing group : III

Labels : Division 6.1 - Toxic substances

ERG Code : 160 Marine pollutant : no

Poison Inhalation Hazard : No

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

CERCLA Reportable Quantity

| Components | CAS-No. | Component | Calculated product |
|-----------------|---------|-----------|--------------------|
| | | RQ (lbs) | RQ (lbs) |
| Dichloromethane | 75-09-2 | 1000 | 1017 |

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

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

SARA 311/312 : Acute Health Hazard Hazards : Chronic Health Hazard

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SARA 313 : The following components are subject to reporting

levels established by SARA Title III, Section 313:

Dichlorometha 75-09-2 >= 90 - <= 100 %

ne

US State Regulations

Massachusetts Right To Know

Dichloromethane 75-09-2

Pennsylvania Right To Know

Dichloromethane 75-09-2

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Dichloromethane 75-09-2

Washington Chemicals of High Concern

Dichloromethane 75-09-2

California Prop. 65

WARNING: This product can expose you to chemicals including Dichloromethane, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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.

After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosionsensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine

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applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: Dichloromethane 75-09-2

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens

TSCA ECEL : TSCA Existing Chemical Exposure Limit

ACGIH / TWA : 8-hour, time-weighted average OSHA CARC / PEL : Permissible exposure limit (PEL)

OSHA CARC / STEL : Excursion limit

TSCA ECEL / ECEL-TWA : Existing Chemical Exposure List (TWA)

TSCA ECEL / EPA STEL : EPA STEL

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 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; 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-Decomposition Temperature; SARA Superfund Amendments Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory;

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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

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Revision Date : 06/25/2025

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