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# **SAFETY DATA SHEET**

Version 6.21 Revision Date 06/25/2025 Print Date 06/26/2025

# SECTION 1. IDENTIFICATION

### **1.1 Product identifiers**

Product name	:	Dichloromethane
Product Number Catalogue No.	:	D65100 612771
Brand	÷	SIGALD
Index-No.	:	602-004-00-3
CAS-No.	:	75-09-2
		<b>*</b> • • • • • • • • •

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

Identified uses :		Laboratory chemicals, Synthesis of substances	
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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, 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 applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

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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 Fax		+1 314 771-5765 +1 800 325-5052
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#### **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)

Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Carcinogenicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system)

#### Other hazards

None known.

Hazard pictograms

Signal Word

: Warning Hazard Statements : H315 Causes skin irritation.

H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer.

Precautionary statements : **Prevention:** 

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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.
P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

# **Response:**

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.

# 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

Substance / Mixture : Substance

# Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Dichloromethane	75-09-2*	>= 80 - <= 100	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**

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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, 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 environmer	it.	
Unsuitable extinguishing media	:	For this substance/mixture no limitations of extinguishing agents are given.		
Specific hazards during fire fighting	:	Not combustible.		
		Ambient fire may liberate hazardous vapours.		
Hazardous combustion products	:	Carbon oxides		
		Hydrogen chloride gas		
Specific extinguishing methods	:	No data available		
Further information SIGALD - D65100	:	Suppress (knock down) gases/vapours/mists with a	Page 4	of 17
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		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). Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.

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

For precautions see section 2.2.					
Advice on safe handling		ler hood. Do not inhale substance/mixture. neration of vapours/aerosols.			
Further information on storage conditions	Keep lock	osed. well-ventilated place. ed up or in an area accessible only to or authorised persons.			
Storage class	,	n-combustible, acute toxic Cat.3 / toxic s materials or hazardous materials causing ffects			
Recommended storage temperature	Recomme	ended storage temperature see product label.			

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Further information on storage stability	:	Heat sensitive.
Packaging material	:	Suitable material: Amber Glass Bottle/Jar

## 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	TSCA ECEL
			57 mg/m3	

#### **Biological occupational exposure limits**

Components	CAS-No.	Control parameter s	Biological specimen	Samplin g time	Permissibl e concentrat ion	Basis
Dichloromethane	75-09-2	Dichlorom ethane	Urine	End of shift (As soon as possible after exposur e ceases)	0.3 mg/l	ACGIH BEI

**Engineering measures** : No data available

#### **Personal protective equipment**

Respiratory protection : required when vapours/aerosols are generated.

Recommended Filter : Filter AX (EN 371) type:

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.

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Hand protection Material Break through time Glove thickness Protective index Manufacturer	::	Viton® 120 min 0.7 mm Splash contact Vitoject® (KCL 890 / Aldrich Z677698, Size M)
Remarks	:	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
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	:	colourless
	Odor	:	ether-like
	Odor Threshold	:	250 ppm
	рН	:	No data available
	Melting point	:	-139 °F / -95 °C (1,013 hPa)
	Boiling point/boiling range	:	103.6 - 104 °F / 39.8 - 40 °C Method: lit.
	Flash point	:	does not flash
SIG	Evaporation rate ALD - D65100	:	0.71

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Burning rate	:	No data available
Self-ignition	:	1121 °F / 605 °C 1,013 hPa Method: DIN 51794
Upper explosion limit / Upper flammability limit	:	22 %(V)
Lower explosion limit / Lower flammability limit	:	13 %(V)
Vapor pressure	:	584 hPa (77 °F / 25 °C)
Relative vapour density	:	2.93
Relative density	:	No data available
Density	:	1.325 g/mL (77 °F / 25 °C) Method: lit.
Solubility(ies) Water solubility	:	13.2 g/l (77 °F / 25 °C)
Partition coefficient: n- octanol/water	:	log Pow: 1.25 (68 °F / 20 °C) Method: (experimental) Bioaccumulation is not expected.
Autoignition temperature	:	1033.0 °F / 556.1 °C
Decomposition temperature	:	No data available
Viscosity		0.42  mPr = c.(77.9E.(35.9C))
Viscosity, dynamic	•	0.42 mPa.s (77 °F / 25 °C)
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	none
Refractive index	:	1.42 (68 °F / 20 °C) 589.3 nm
Molecular weight	:	84.93 g/mol
Particle characteristics Particle size SIGALD - D65100	:	No data available

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# SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No data available
Chemical stability	:	Sensitivity to light
		The product is chemically stable under standard ambient conditions (room temperature) .
Contains the following stabiliser(s):	:	2-methyl-2-butene (0.005 %)
Possibility of hazardous reactions	:	Risk of explosion with: Alkali metals nitrogen oxides nitrogen dioxide Potassium sodium azide perchloric acid Nitric acid aluminium chloride Amines Oxygen (as liquefied gas) powdered aluminium sodium aromatic hydrocarbons with powdered aluminium Exothermic reaction with: Alkaline earth metals Powdered metals amides alcoholates nonmetallic oxides potassium tert-butanolate sodium amide Lithium
Conditions to avoid	:	no information available
Incompatible materials	:	No data available
Hazardous decomposition products	:	In the event of fire: see section 5

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# SECTION 11. TOXICOLOGICAL INFORMATION

# 11.1 Information on toxicological effects

#### **Acute toxicity**

Acute toxicity estimate Oral - 2,500 mg/kg (Calculation method) 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 Acute toxicity estimate Dermal - 2,500 mg/kg (Calculation method) 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 Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: positive Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: positive

Test Type: In vivo micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Gavage Method: OECD Test Guideline 474 Result: negative

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# Carcinogenicity

Suspected of causing cancer.

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

Inhalation - May cause drowsiness or dizziness. - Central nervous system

# Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### **11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 104 Weeks - No observed adverse effect level - 6 mg/kg

Repeated dose toxicity - Rat - male and female - Inhalation - 104 Weeks

#### RTECS: PA8050000

Dizziness, Nausea, Vomiting, narcosis, Cough, irritant effects, Unconsciousness, Shortness of breath, respiratory paralysis, somnolence, depressed respiration, CNS disorders, inebriation

Risk of corneal clouding.

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

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.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

After absorption of large quantities:

CNS disorders Drowsiness Dizziness drop in blood pressure Cardiac irregularities depressed respiration inebriation Unconsciousness narcosis

Swallowing may result in damage to the following:

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Liver Kidney

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

# **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity		
<u>Components:</u>		
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 mg/l End point: mortality Exposure time: 8 d Test Type: flow-through test Analytical monitoring: yes Remarks: (ECHA)
Toxicity to microorganisms	:	EC50 (activated sludge): 2,590 mg/l Exposure time: 40 min Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 209
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# Persistence and degradability

#### Components:

Dichlorometha	ne:
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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

#### **Bioaccumulative potential**

#### Components:

<b>Dichloromethane:</b> 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
Partition coefficient: n- : octanol/water	log Pow: 1.25 (68 °F / 20 °C) pH: 7 Method: (experimental) Remarks: Bioaccumulation is not expected.
<b>Mobility in soil</b> No data available	
Other adverse effects	

# Components:

#### Dichloromethane:

Results of PBT and vPvB	:	Substance is not persistent, bioaccumulative, and
assessment		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

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# 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. Proper shipping name Class Packing group Labels Packing instruction (cargo aircraft) Packing instruction (passenger aircraft)	: : :	6.1 III Division 6.1 - Toxic substances		
<b>IMDG-Code</b> UN number Proper shipping name	-	UN 1593 DICHLOROMETHANE		
Class Packing group Labels EmS Code Marine pollutant	:	6.1 III 6.1 F-A, S-A no		
Transport in bulk according to IMO instruments Not applicable for product as supplied.				
National Regulations				

#### 49 CFR Road

UN/ID/NA number Proper shipping name	-	UN 1593 Dichloromethane
Class Packing group Labels ERG Code Marine pollutant	::	6.1 III Division 6.1 - Toxic substances 160 no
Poison Inhalation Hazard SIGALD - D65100	:	No

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## 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	1000

# 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 Hazards	: Acute Health Hazard Chronic Health Hazard			
SARA 313	The following components are subject to reporting levels established by SARA Title III, Section 313:			
	Dichlorometha 75-09-2 ne	>= 90 - <= 100 %		
<b>US State Regulations</b>				
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 H	igh 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

: All substances listed as active on the TSCA inventory

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# **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 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

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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, OPPTS 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 Accelerating 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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Revision Date : 06/25/2025

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