

SAFETY DATA SHEET

Version 6.9 Revision Date 07/01/2025 Print Date 07/02/2025

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : Diethylcarbamoyl chloride

Product Number : D91403 Brand : Aldrich

Index-No. : 607-229-00-0 CAS-No. : 88-10-8

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

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)

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

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Acute toxicity (Inhalation)

: Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure

: Category 3 (Respiratory system)

Other hazards

None known.

GHS label elements

Hazard pictograms





Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H302 + H332 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation. H335 May cause respiratory irritation. H351 Suspected of causing cancer.

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have

been read and understood.

P210 Keep away from heat/ sparks/ open flames/ hot

surfaces. No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/

spray.

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. 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.

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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

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

P403 + P235 Store in a well-ventilated place. Keep cool. 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
diethylcarbamoyl chloride	88-10-8*	>= 90 - <= 100	-

^{*} Indicates that the identifier is a CAS No.

Actual concentration 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. Immediately call in

physician.

If breathing stops: immediately apply artificial

respiration, if necessary also oxygen.

In case of skin contact : In case of skin contact: Take off immediately all

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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

: Water Foam

Carbon dioxide (CO2)

Dry powder

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.

Specific hazards during

fire fighting

: Not combustible.

Combustible.

Vapours are heavier than air and may spread along

floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or

vapours possible in the event of fire.

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Ambient fire may liberate hazardous vapours.

Hazardous combustion

products

: Carbon oxides

Nitrogen oxides (NOx)

Hydrogen chloride gas

Specific extinguishing

methods

: No data available

Further information : Remove container from danger zone and cool with

water.

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.

Keep away from heat and sources of ignition. 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.

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SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Advice on protection against fire and explosion

: Keep away from open flames, hot surfaces and

sources of ignition.

Take precautionary measures against static discharge.

Advice on safe handling

: Work under hood. Do not inhale substance/mixture.

Avoid generation of vapours/aerosols.

Further information on storage conditions

: Tightly closed.

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: 10, Combustible liquids

Recommended storage

temperature

Storage class

: Recommended storage temperature see product label.

Further information on

storage stability

: Exposure to moisture

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

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: 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

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Material : butyl-rubber
Break through time : 480 min
Glove thickness : 0.7 mm
Protective index : Full contact

Manufacturer : Butoject® (KCL 898)

Material : butyl-rubber Break through time : 480 min Glove thickness : 0.7 mm

Protective index : Splash contact

Manufacturer : Butoject® (KCL 898)

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 : light yellow

Odor : No data available

Odor Threshold : No data available pH : No data available

Melting point/ range : -26 °F / -32 °C

Boiling point/boiling range : 243 - 253 °F / 117 - 123 °C (177 hPa)

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Flash point : $169 \, ^{\circ}\text{F} / 76 \, ^{\circ}\text{C}$

Method: closed cup

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 : 1.07 g/mL (77 °F / 25 °C)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : 752 °F / 400 °C

Decomposition temperature

: No data available

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Flow time : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Molecular weight : 135.59 g/mol

Particle characteristics

Particle size : No data available

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SECTION 10. STABILITY AND REACTIVITY

Reactivity : Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point

is to be rated as critical.

Chemical stability : The product is chemically stable under standard

ambient conditions (room temperature).

Possibility of hazardous

reactions

: Violent reactions possible with:

Strong oxidizing agents

Alcohols Amines Water

Conditions to avoid : Strong heating.

Incompatible materials : No data available

products

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

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

gastrointestinal tract. Oral: No data available

Acute toxicity estimate Oral - 500.1 mg/kg

(Expert judgement)

Inhalation: No data available

Acute toxicity estimate Inhalation - 4 h - 11.1 mg/l - vapour

(Expert judgement)

Inhalation: Irritating to respiratory system.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of

respiratory tract, Lung oedema, The substance has delayed effects.

Dermal: No data available

No data available

Skin corrosion/irritation

Remarks: Causes skin irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Remarks: Causes serious eve irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

No data available

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Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer.

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

Inhalation - May cause respiratory irritation. - Respiratory Tract

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

RTECS: FD4025000

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

Decomposition of the substance with tissue moisture.

Systemic effects:

Nausea

Unconsciousness

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

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Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

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

This material does not contain any components with a CERCLA RQ.

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. Aldrich - D91403

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SARA 311/312

Hazards

: Fire Hazard

Acute Health Hazard Chronic Health Hazard

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.

US State Regulations

Massachusetts Right To Know

diethylcarbamoyl chloride 88-10-8

Massachusetts Right To Know

diethylcarbamoyl chloride 88-10-8

Pennsylvania Right To Know

diethylcarbamoyl chloride 88-10-8

Pennsylvania Right To Know

diethylcarbamoyl chloride 88-10-8

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

diethylcarbamoyl chloride 88-10-8

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

TSCA : All substances listed as active on the 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

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 -

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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; 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

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Revision Date : 07/01/2025

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