

## Chemical Safety Data Sheet MSDS / SDS

## DIHYDROCODEINE TRIFLUOROACETATE

Revision Date:2026-05-31 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

Product name : DIHYDROCODEINE TRIFLUOROACETATE  
CBnumber : CB7100972  
CAS : 125-28-0  
EINECS Number : 204-732-3  
Synonyms : Dihydrocodeine trifluoroacetate,7,8-Dihydrocodeine

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P311 Call a POISON CENTER or doctor/physician.

**Hazard statements**

H225 Highly Flammable liquid and vapour  
H370 Causes damage to organs

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: DIHYDROCODEINE TRIFLUOROACETATE
Synonyms	: Dihydrocodeine trifluoroacetate,7,8-Dihydrocodeine
CAS	: 125-28-0
EC number	: 204-732-3
MF	: C20H24F3NO4
MW	: 399.4

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## SECTION 4: First aid measures

### Description of first aid measures

#### General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### After inhalation

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.

#### After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

#### After swallowing

Do not induce vomiting; immediately call for medical help.

#### Information for doctor

#### Most important symptoms and effects, both acute and delayed

No further relevant information available.

#### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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## SECTION 5: Firefighting measures

### Extinguishing media

## Suitable extinguishing agents

Use fire fighting measures that suit the environment.

A solid water stream may be inefficient.

## Special hazards arising from the substance or mixture

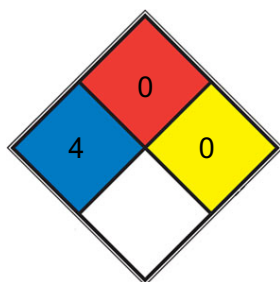
No further relevant information available.

## Advice for firefighters

## Protective equipment

Mouth respiratory protective device.

## NFPA 704



**HEALTH 4** Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, [hydrofluoric acid](#))

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

**SPEC.**  
**HAZ.**

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Not required.

### Environmental precautions

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### **Protective Action Criteria for Chemicals**

#### **PAC-1**

Substance is not listed.

#### **PAC-2**

Substance is not listed.

#### **PAC-3**

Substance is not listed.

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## SECTION 7: Handling and storage

### **Handling**

#### **Precautions for safe handling**

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

#### **Information about protection against explosions and fires**

Keep respiratory protective device available.

#### **Conditions for safe storage, including any incompatibilities**

### **Storage**

Store in accordance with information listed on the product insert.

#### **Requirements to be met by storerooms and receptacles**

No special requirements.

#### **Information about storage in one common storage facility**

Not required.

#### **Further information about storage conditions**

Keep receptacle tightly sealed.

#### **Specific end use(s)**

No further relevant information available.

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## SECTION 8: Exposure controls/personal protection

## **Additional information about design of technical systems**

No further data; see item 7.

## **Control parameters**

## **Components with limit values that require monitoring at the workplace**

Not required.

## **Additional information**

The lists that were valid during the creation were used as basis.

## **Exposure controls**

## **Personal protective equipment**

## **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

## **Breathing equipment**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

## **Protection of hands**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

## **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

## **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## **Eye protection**

Not required.

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# SECTION 9: Physical and chemical properties

## Information on basic physicochemical properties

### Appearance

### Physical State

Solid

### Color

According to product specification

### Odor

Characteristic

### Structural Formula

C<sub>18</sub>H<sub>23</sub>NO<sub>3</sub>

### Molecular Weight

301.4 g/mol

### Odor Threshold

Not determined.

### pH

Not applicable.

### Change in condition

### Melting point/Melting range

Undetermined.

### Boiling point/Boiling range

bp<sub>15</sub> 248°

### Flash point

9°C

### Flammability (solid,gas)

Product is not flammable.

### Decomposition temperature

Not determined.

### Auto igniting

Not determined.

### Danger of explosion

Product does not present an explosion hazard.

**Explosion limits**

Lower: Not determined.

Upper: Not determined.

**Vapor Pressure**

Not applicable.

**Density**

1.1412 (rough estimate)

**Relative Density**

1.1412 (rough estimate)

**Vapor Density**

Not applicable.

**Evaporation Rate**

Not applicable.

**Solubility in / Miscibility with**

DMF: 20 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: 10 mg/ml

**Water**

Soluble.

**Partition coefficient (n-octanol/water)**

Not determined.

**Viscosity****Dynamic**

Not applicable.

**Kinematic**

Not applicable.

**VOC content**

0.00 %

**Solids content**

100.0 %

**Other information**

No information available

## SECTION 10: Stability and reactivity

### Reactivity

No further relevant information available.

### Chemical stability

### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

No further relevant information available.

### Hazardous decomposition products

No dangerous decomposition products known.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD/LC50 values that are relevant for classification:

Substance / Estimate	Route	Endpoint	Value
ATE (Acute Toxicity Estimate)	Oral	LD50	100 mg/kg
ATE (Acute Toxicity Estimate)	Dermal	LD50	300 mg/kg
ATE (Acute Toxicity Estimate)	Inhalative	LC50/4 h	0.5 mg/l
125-28-0 Dihydrocodeine	Oral	TDLO	28 ml/kg (man)
125-28-0 Dihydrocodeine	Subcutaneous	TDLO	6 mg/kg/36H intermittent (wmn)
125-28-0 Dihydrocodeine	Subcutaneous	LD50	135 mg/kg (mouse)

#### Primary irritant effect

##### on the skin

No irritant effect.

##### on the eye

No irritating effect.

## **Sensitization**

### **Sensitization**

possible through inhalation.

### **Sensitization**

possible through skin contact.

## **Additional toxicological information**

### **Carcinogenic categories**

### **IARC (International Agency for Research on Cancer)**

Substance is not listed.

### **NTP (National Toxicology Program)**

Substance is not listed.

### **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

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## SECTION 12: Ecological information

### **Toxicity**

#### **Aquatic toxicity**

No further relevant information available.

#### **Persistence and degradability**

No further relevant information available.

#### **Behavior in environmental systems**

#### **Bioaccumulative potential**

No further relevant information available.

#### **Mobility in soil**

No further relevant information available.

#### **Additional ecological information**

### **General notes**

Water hazard class 1 (Self-assessment) slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### **Results of PBT and vPvB assessment**

**PBT**

Not applicable.

**vPvB**

Not applicable.

**PBT:**

Not applicable.

**vPvB:**

Not applicable.

**Other adverse effects**

No further relevant information available.

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## SECTION 13: Disposal considerations

**Waste treatment methods****Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings****Recommendation**

Disposal must be made according to official regulations.

**Recommended cleansing agent**

Water, if necessary with cleansing agents.

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## SECTION 14: Transport information

**UN-Number**

DOT, IMDG, IATA UN2811

**UN proper shipping name**

DOT Toxic solids, organic, n.o.s. (Dihydrocodeine)

IMDG TOXIC SOLID, ORGANIC, N.O.S. (Dihydrocodeine)

IATA Toxic solid, organic, n.o.s. (Dihydrocodeine)

**Transport hazard class(es)**

DOT

Class: 6.1 Toxic substances

Label: 6.1

**IMDG, IATA**

Class: 6.1 Toxic substances

Label: 6.1

**Packing group**

DOT, IMDG, IATA II

**Environmental hazards**

Not applicable.

**Special precautions for user**

Warning: Toxic substances

**Hazard identification number (Kemler code)**

60

**EMS Number**

F-A,S-A

**Stowage Category**

B

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information**

**DOT:**

**Quantity limitations**

On passenger aircraft/rail: 25 kg

On cargo aircraft only: 100 kg

**IMDG:**

**Limited quantities (LQ)**

500 g

**Excepted quantities (EQ)**

Code: E4

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 500 g

**IATA:**

## Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

## UN "Model Regulation"

UN 2811 TOXIC SOLID, ORGANIC, N.O.S.  
(DIHYDROCODEINE), 6.1, II

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

No further relevant information available.

### Sara

Section 355 (extremely hazardous substances):	Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is not listed.
TSCA (Toxic Substances Control Act):	Substance is not listed.
Hazardous Air Pollutants:	Substance is not listed.

### Proposition 65

Chemicals known to cause cancer:	Substance is not listed.
Chemicals known to cause reproductive toxicity for females:	Substance is not listed.
Chemicals known to cause reproductive toxicity for males:	Substance is not listed.
Chemicals known to cause developmental toxicity:	Substance is not listed.

### Carcinogenic categories

EPA (Environmental Protection Agency):	Substance is not listed.
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### TLV (Threshold Limit Value)

Substance is not listed.

### NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

## Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.