

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Dimethylcarbamoyl chloride

### 1.2 Other means of identification

**Product number** -  
**Other names** N,N-dimethyl-carbamic acid chloride; Carbamic chloride, dimethyl-; rcrawastenu097

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral  
Skin irritation, Category 2  
Eye irritation, Category 2  
Acute toxicity - Category 3, Inhalation  
Specific target organ toxicity – single exposure, Category 3  
Carcinogenicity, Category 1B

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Danger  
**Hazard statement(s)** H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation

H331 Toxic if inhaled  
H335 May cause respiratory irritation  
H350 May cause cancer

**Precautionary statement(s)**

**Prevention**

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P203 Obtain, read and follow all safety instructions before use.

**Response**

P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P316 Get emergency medical help immediately.  
P319 Get medical help if you feel unwell.  
P318 IF exposed or concerned, get medical advice.

**Storage**

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

**Disposal**

P405 Store locked up.  
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**2.3 Other hazards which do not result in classification**

no data available

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**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Dimethylcarbamoyl chloride	Dimethylcarbamoyl chloride	79-44-7	201-208-6	100%

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**SECTION 4: First-aid measures**

**4.1 Description of necessary first-aid measures**

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

## 4.2 Most important symptoms/effects, acute and delayed

Material is extremely destructive to the mucous membranes, upper respiratory tract, eyes, and skin. Symptoms of exposure include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. (USCG, 1999)

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Excerpt from ERG Guide 156 [Substances - Toxic and/or Corrosive (Combustible / Water-Sensitive)]: Note: Most foams will react with the material and release corrosive/toxic gases. SMALL FIRE: CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. LARGE FIRE: Water spray, fog or alcohol-resistant foam. FOR CHLOROSILANES, DO NOT USE WATER; use AFFF alcohol-resistant medium-expansion foam. Move containers from fire area if you can do it without risk. Use water spray or fog; do not use straight streams. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)

### 5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Toxic fumes of NO<sub>x</sub> and HCl (USCG, 1999)

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

PRECAUTIONS FOR "CARCINOGENS": A high-efficiency particulate arrester (HEPA) or charcoal filters can be used to minimize amt of carcinogen in exhausted air ventilated safety cabinets, lab hoods, glove boxes or animal rooms ... Filter housing that is designed so that used filters can be transferred into plastic bag without contaminating maintenance staff is avail commercially. Filters should be placed in plastic bags immediately after removal ... The plastic bag should be sealed immediately ... The sealed bag should be labelled properly ... Waste liquids ... should be placed or collected in proper containers for disposal. The lid should be secured & the bottles properly labelled. Once filled, bottles should be placed in plastic bag, so that outer surface ... is not contaminated ... The plastic bag should also be sealed & labelled. ... Broken glassware ... should be decontaminated by solvent extraction, by chemical destruction, or in specially designed incinerators. Chemical Carcinogens

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire

caused by electrostatic discharge steam.

## 7.2 Conditions for safe storage, including any incompatibilities

PRECAUTIONS FOR "CARCINOGENS": Storage site should be as close as practical to lab in which carcinogens are to be used, so that only small quantities required for ... expt need to be carried. Carcinogens should be kept in only one section of cupboard, an explosion-proof refrigerator or freezer (depending on chemico-physical properties ...) that bears appropriate label. An inventory ... should be kept, showing quantity of carcinogen & date it was acquired ... Facilities for dispensing ... should be contiguous to storage area.  
Chemical Carcinogens

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Dimethylcarbamoyl chloride			
<b>CAS No.</b>	79-44-7			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Canada - Ontario</b>	0,005			
<b>Ireland</b>	0,005	0,2		
<b>South Korea</b>	0,005			
	<b>Remarks</b>			

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

#### Physical state

Dimethylcarbamoyl chloride is a colorless to yellow liquid with a pungent odor. Burns to skin, eyes and mucous membranes. A lachrymator. Used to make dyes and pharmaceuticals.

#### Colour

Clear, colorless liquid.

#### Odour

no data available

<b>Melting point/freezing point</b>	236°C(dec.)(lit.)
<b>Boiling point or initial boiling point and boiling range</b>	348°C(lit.)
<b>Flammability</b>	Class IIIA Combustible Liquid: Fl.P. at or above 140°F and below 200°F.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	82°C(lit.)
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	Decomposes (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	no data available
<b>Vapour pressure</b>	1.95 mm Hg @ 25 deg C
<b>Density and/or relative density</b>	1.168
<b>Relative vapour density</b>	3.73 (NTP, 1992) (Relative to Air)
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

NIOSH recommends that dimethyl carbamoyl chloride be regulated as a potential human carcinogen.

### 10.2 Chemical stability

Rapidly hydrolyzes in water to dimethylamine, carbon dioxide & hydrochloric acid; its half-life @ 0 deg c is about 6 min.

### 10.3 Possibility of hazardous reactions

DIMETHYLCARBAMOYL CHLORIDE is water reactive. Incompatible with strong oxidizing agents, alcohols, bases (including amines). May react vigorously or explosively if mixed with diisopropyl ether or other ethers in the presence of trace amounts of metal salts [J. Haz. Mat., 1981, 4, 291]. Gives toxic fumes of NO<sub>x</sub> and HCl when burned (USCG, 1999).

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Extremely reactive

### 10.6 Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /hydrogen chloride and nitrogen oxides/.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 1 g/kg
- Inhalation: LC50 Rat inhalation 180 ppm/6 hr
- Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

The Human Health Assessment Group in EPA's Office of Health and Environmental Assessment has evaluated dimethylcarbamoyl chloride carcinogenicity. According to their analysis, the weight-of-evidence for dimethylcarbamoyl chloride is group B2, which is based on inadequate evidence in humans and sufficient evidence in animals. As a group B2 chemical, dimethylcarbamoyl chloride is considered to be probably carcinogenic to humans.

**Reproductive toxicity**

No information is available on the reproductive or developmental effects of dimethylcarbamoyl chloride in humans or animals.

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

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**SECTION 12: Ecological information****12.1 Toxicity**

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

Since dimethylcarbamoyl chloride rapidly hydrolyzes in water(1), bioconcentration of dimethylcarbamoyl chloride in aquatic organisms is not expected to be an important environmental fate process(SRC).

**12.4 Mobility in soil**

Since dimethylcarbamoyl chloride rapidly hydrolyzes in water and moist soil(1), adsorption to soil is not expected to be an important environmental fate process(SRC).

**12.5 Other adverse effects**

no data available

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**SECTION 13: Disposal considerations****13.1 Disposal methods**

## Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

## Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN2262 (For reference only, please check.)      IMDG: UN2262 (For reference only, please check.)      IATA: UN2262 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: DIMETHYLCARBAMOYL CHLORIDE (For reference only, please check.)      IMDG: DIMETHYLCARBAMOYL CHLORIDE (For reference only, please check.)      IATA: DIMETHYLCARBAMOYL CHLORIDE (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (For reference only, please check.)      IMDG: 8 (For reference only, please check.)      IATA: 8 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: II (For reference only, please check.)      IMDG: II (For reference only, please check.)      IATA: II (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No      IMDG: No      IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Dimethylcarbamoyl chloride	Dimethylcarbamoyl chloride	79-44-7	201-208-6
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
<b>EC Inventory</b>			Listed.
<b>United States Toxic Substances Control Act (TSCA) Inventory</b>			Listed.
<b>China Catalog of Hazardous chemicals 2015</b>			Listed.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>			Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>			Listed.
<b>Vietnam National Chemical Inventory</b>			Listed.

<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>	Listed.
<b>Korea Existing Chemicals List (KECL)</b>	Listed.

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## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019

**Revision Date** July 15, 2019

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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