

Dimethyl dicarbonate: sc-214900



The Power to Question

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Dimethyl dicarbonate

Product Number: sc-214900

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Combustible Liquid, toxic by inhalation, toxic by ingestion, harmful by skin absorption, corrosive.

GHS Classification

Flammable liquids (Category 4)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 4)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H227 Combustible liquid

H302 + H312 Harmful if swallowed or in contact with skin

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

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

P284 Wear respiratory protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 3

Flammability: 2

Physical hazards: 0

NFPA Rating

Health hazard: 3

Fire: 2

Reactivity Hazard: 0

Potential Health Effects

- Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Skin** Causes skin burns.
- Eyes** Causes eye burns.
- Ingestion** Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: C₄H₆O₅

Molecular Weight: 134.09

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
Dimethyl dicarbonate 4525-33-1	224-859-8	-	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions – carbon oxides

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – no smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle and store under inert gas. Handle and open container with care. Store at 4° C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	clear, liquid	pH	no data available
Melting point/freezing point	no data available	Ignition temperature	no data available
Auto-ignition temperature	no data available	Evaporation rate	no data available
Lower explosion limit	no data available	Upper explosion limit	no data available
Water solubility	no data available	Relative vapor density	no data available
Odor	no data available	Odor Threshold	no data available
Density	1.25 g/mL at 25 °C (77 °F)	Vapor pressure	no data available
Partition coefficient: n-octanol/water	no data available	Flash point	80 °C (176 °F) - closed cup

Boiling point: 45 – 46 °C (113 – 115 °F) at 7 hPa (5 mmHg)

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks. Do not heat over: 30°C

Materials to avoid

Strong oxidizing agents, Strong bases

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions – carbon oxides

Other decomposition products

no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Oral LD50 LD50 Oral – rat – 335 mg/kg

Inhalation LC50 LC50 Inhalation – rat – 4 h – 711 mg/m³ Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Tremor. Lungs, Thorax, or Respiration:Dyspnea.

Dermal LD50 LD50 Dermal – rat – 1,250 mg/kg

Other information on acute toxicity no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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 identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity – single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity – repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Toxic if swallowed.

Skin Causes skin burns.

Eyes Causes eye burns.

Synergistic effects

no data available

Additional Information

RTECS: HT0362500

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Bioaccumulative potential

no data available

PBT and vPvB assessment

no data available

Persistence and degradability

no data available

Mobility in soil

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2927

Class: 6.1 (8)

Packing group: II

Proper shipping name: Toxic liquids, corrosive, organic, n.o.s. (Dimethyl dicarbonate)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 2927

Class: 6.1 (8)

Packing group: II

EMS-No: F-A, S-B

Proper shipping name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (Dimethyl dicarbonate)

Marine pollutant: No

IATA

UN number: 2927

Class: 6.1 (8)

Packing group: II

Proper shipping name: Toxic liquid, corrosive, organic, n.o.s. (Dimethyl dicarbonate)

15. REGULATORY INFORMATION

OSHA Hazards

Combustible Liquid, toxic by inhalation, toxic by ingestion, harmful by skin absorption, corrosive

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

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.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Dimethyl dicarbonate

CAS-No. 4525-33-1

New Jersey Right To Know Components

Dimethyl dicarbonate

CAS-No. 4525-33-1

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

2/27/2013