# 3,4-Dichloro-1-butene: sc-231978

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** 3,4-Dichloro-1-butene
**Product Number:** sc-231978

**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**

Flammable liquid. Harmful by ingestion. Corrosive

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

Lachrymator.

**GHS Classification**

Flammable liquids (Category 3)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 2)

**GHS Label elements, including precautionary statements**

Pictogram

Signal word: Danger

**Hazard statement(s)**

| | |
|---|---|
| H226 | Flammable liquid and vapor. |
| H302 + H332 | Harmful if swallowed or if inhaled. |
| H314 | Causes severe skin burns and eye damage. |
| H401 | Toxic to aquatic life. |

**Precautionary statement(s)**

| | |
|---|---|
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face 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:** 3
**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 3
**Fire:** 3
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin:** Harmful if absorbed through skin. Causes skin burns.

**Eyes:** Causes eye burns.

**Ingestion:** Harmful if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Formula:** C4H6Cl2

**Molecular Weight:** 125.00

| *CAS-No.* | *EC-No.* | *Index-No.* | *Concentration* |
|---|---|---|---|
| **3,4-Dichloro-1-butene** | | | |
| 760-23-6 | 212-079-0 | - | - |

## 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. 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, hydrogen chloride gas

**Further information**

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Use personal protective equipment. 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. Discharge into the environment must be avoided.

**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).

## 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**

Store in cool place. 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. Recommended storage temperature: 2 - 8 °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.

**Eye protection**

Tightly fitting safety goggles. Faceshield (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. Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| Form | liquid | pH | no data available |
| Melting point/freezing point | -61 °C (-78 °F) - lit. | Ignition temperature | no data available |
| Boiling point | 123 °C (253 °F) - lit. | Auto-ignition temperature | no data available |
| Lower explosion limit | no data available | Upper explosion limit | no data available |
| Water solubility | no data available | Evaporation rate | no data available |
| Odor | no data available | Odor Threshold | no data available |
| Density | 1.15 g/cm3 at 25 °C (77 °F) | Partition coefficient: n-octanol/water | no data available |
| Flash point | 28 °C (82 °F) - closed cup | Relative vapor density | 4.31 - (Air = 1.0) |

**Vapor pressure:** 23 hPa (17 mmHg) at 25 °C (77 °F)

## 10. STABILITY AND REACTIVITY

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Vapors may form explosive mixture with air.

**Conditions to avoid**

Heat, flames and sparks.

**Materials to avoid**

Strong oxidizing agents. Strong bases

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions - Carbon oxides, hydrogen chloride gas

**Other decomposition products**
no data available

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**: LD50 Oral - mouse - 724 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Excitement. Lungs, Thorax, or Respiration:Dyspnea.
**Inhalation LC50**: LC50 Inhalation - rat - 4 h - 2100 ppm
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.
**Dermal LD50**: no data available
**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:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
**Skin:** Harmful if absorbed through skin. Causes skin burns.
**Eyes:** Causes eye burns.
**Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure**
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea
**Synergistic effects**
no data available
**Additional Information**
**RTECS:** EM4740000

## 12. ECOLOGICAL INFORMATION

**PBT and vPvB assessment**
no data available

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available

**Toxicity**

**Toxicity to fish:** LC50 - Pimephales promelas (fathead minnow) - 7.17 mg/l - 96 h

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 2920 Class: 8 (3) Packing group: II
Proper shipping name: Corrosive liquids, flammable, n.o.s. (3,4-Dichloro-1-butene)
Marine Pollutant: No
Poison Inhalation Hazard: No

**IMDG**

UN number: 2920 Class: 8 (3) Packing group: II EMS-No: F-E, S-C
Proper shipping name: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (3,4-Dichloro-1-butene)
Marine Pollutant: No

**IATA**

UN number: 2920 Class: 8 (3) Packing group: II
Proper shipping name: Corrosive liquid, flammable, n.o.s. (3,4-Dichloro-1-butene)

## 15. REGULATORY INFORMATION

**OSHA Hazards**

Flammable liquid. Harmful by ingestion. 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**

3,4-Dichloro-1-butene CAS-No.: 760-23-6

**New Jersey Right To Know Components**

3,4-Dichloro-1-butene CAS-No.: 760-23-6

**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.***

1217/2012