

# Safety data sheet



According to EG/EC Number 2037797

Date of issue: 03/11/2011

## 1. Identification of the substance/preparation and of the company/undertaking

### Identification of the product

Product name: TRANS-1,4-DICHLORO-2-BUTENE,

### Manufacturer/supplier identification

Company: chengdu chuanke Fine Chemicals Co.,Ltd

Tel:+86 28 85405627 . Fax:+86 28 68626099

Emergency telephone: Please contact our company

## 2. Composition/information on ingredients

CAS-NO: 110-57-6

Density: 1.183 g/mL at 25 °C EC-NO: 203-779-7

Molecular formula: C<sub>4</sub>H<sub>6</sub>Cl<sub>2</sub>

## 3. Hazards identification

EMERGENCY OVERVIEW Combustible (USA) Flammable (EU). Highly Toxic (USA) Very Toxic (EU). Toxic in contact with skin and if swallowed. Very toxic by inhalation. Causes burns.

Lachrymator. Calif. Prop. 65 carcinogen. HMIS RATING HEALTH: 3 FLAMMABILITY: 2

REACTIVITY: 1 NFPA RATING HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 1

## 4. First aid measures

ORAL EXPOSURE If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting.

INHALATION EXPOSURE If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

## 5. Fire-fighting measures

FLASH POINT 127.4 °F 53 °C Method: closed cup AUTOIGNITION TEMP N/A FLAMMABILITY N/A EXTINGUISHING MEDIA Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Combustible liquid. Emits toxic fumes under fire conditions.

## 6. Accidental release measures

### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

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## 7. Handling and storage

### HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

### STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.

Store at 2-8°C SPECIAL REQUIREMENTS Light and moisture sensitive.

## 8. Exposure controls/personal protection

### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Faceshield (8-inch minimum).

### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

## 9. Physical and chemical properties

Appearance Physical State: Clear liquid

Color: Faintly yellow

Property Value At Temperature or Pressure

Molecular Weight 125 AMU pH N/A

BP/BP Range 74 - 76 °C 40 mmHg

MP/MP Range 1 - 3 °C Freezing Point N/A

Vapor Pressure 10 mmHg 20 °C Vapor Density N/A

Saturated Vapor Conc. N/A SG/Density 1.192 g/cm<sup>3</sup>

Bulk Density N/A Odor Threshold N/A

Volatile% N/A VOC Content N/A

Water Content N/A Solvent Content N/A

Evaporation Rate N/A Viscosity N/A

Surface Tension N/A Partition Coefficient N/A

Decomposition Temp. N/A Flash Point 127.4 °F 53 °C Method: closed cup

Explosion Limits N/A Flammability N/A

Autoignition Temp N/A

Refractive Index 1.489

Optical Rotation N/A

Miscellaneous Data N/A

Solubility N/A

N/A = not available

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## 10. Stability and reactivity

### STABILITY

Conditions of Instability: May decompose on exposure to light. May decompose on exposure to moist air or water. Materials to Avoid: Strong oxidizing agents, Strong bases.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION Hazardous Polymerization: Will not occur

## 11. Toxicological information

### ROUTE OF EXPOSURE

Skin Contact: Causes burns. Skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes burns. Lachrymator. Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

### SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### TOXICITY DATA

Inhalation

Rat

86 ppm

LC50

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Lungs, Thorax, or Respiration: Other changes. Gastrointestinal: Changes in structure or function of salivary glands.

### CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Species: Mouse

Route of Application: Intraperitoneal

Dose: 150 MG/KG

Exposure Time: 77W

Frequency: I

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.

Species: Mouse

Route of Application: Subcutaneous

Dose: 150 MG/KG

Exposure Time: 77W

Frequency: I

Result: Tumorigenic: Neoplastic by RTECS criteria.

Tumorigenic: Tumors at site or application.

IARC CARCINOGEN LIST

Rating: Group 3

## 12. Ecological information

No ecological problems are to be expected when the product is handled and used with due care and attention.

## 13. Disposal considerations

### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

## 14. Transport information

DOT

Proper Shipping Name: Toxic liquids, corrosive, organic, n.o.s., [inhalation hazard, Packing Group I, Zone B]

UN#: 2927

Class: 6.1

Packing Group: Packing Group I

Hazard Label: Poison inhalation hazard

Hazard Label: Corrosive

Hazard Label: Flammable

PIH: Zone B

IATA

Proper Shipping Name: Toxic liquid, corrosive, organic, n.o.s.

IATA UN Number: 2927

Hazard Class: 6.1

Packing Group: I

Not Allowed - Aircraft: Not permitted for air transport.

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## 15. Regulatory information

### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T+

Indication of Danger: Very toxic.

R: 10 21 25 26 34

Risk Statements: Flammable. Harmful in contact with skin. Toxic if swallowed. Very toxic by inhalation. Causes burns.

S: 53 23 26 36/37/39 45

Safety Statements: Avoid exposure - obtain special instructions before use. Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Combustible (USA) Flammable (EU). Highly Toxic (USA) Very Toxic (EU).

Risk Statements: Toxic in contact with skin and if swallowed. Very toxic by inhalation. Causes burns.

Safety Statements: Avoid exposure - obtain special instructions before use. Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements: Lachrymator. Calif. Prop. 65 carcinogen.

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### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

DEMINIMIS: 1 %

NOTES: This product is subject to SARA section 313 reporting requirements.

TSCA INVENTORY ITEM: Yes

### UNITED STATES - STATE REGULATORY INFORMATION

#### CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s) known to the state of California to cause cancer.

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: Yes

Additional labeling according to China regs.on hazardous substances and to the China Emission Protection Act

There are no statutory data on the toxicological properties of this product according to Directive EG/EC Number 2058602. Dangerous properties cannot be excluded. The substance must be handled with the same caution as dangerous chemicals.

## 16.

for your country.

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*