ChemicalBook

# Chemical Safety Data Sheet MSDS / SDS

# TRANS-1,4-DICHLORO-2-BUTENE

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

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

### Product identifier

| | |
|---|---|
| Product name | : TRANS-1,4-DICHLORO-2-BUTENE |
| CBnumber | : CB2705138 |
| CAS | : 764-41-0 |
| EINECS Number | : 212-121-8 |
| Synonyms | : TRANS-1,4-DICHLORO-2-BUTENE,1,4-dichloro-2-butene |

### 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**

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

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

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects

H350 May cause cancer

H330 Fatal if inhaled

H314 Causes severe skin burns and eye damage

H226 Flammable liquid and vapour

## SECTION 3: Composition/information on ingredients

### Substance

| | |
|---|---|
| Product name | : TRANS-1,4-DICHLORO-2-BUTENE |
| Synonyms | : TRANS-1,4-DICHLORO-2-BUTENE,1,4-dichloro-2-butene |
| CAS | : 764-41-0 |
| EC number | : 212-121-8 |
| MF | : C4H6Cl2 |
| MW | : 125 |

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## SECTION 4: First aid measures

### If inhaled

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

### In case of skin contact

Take off all contaminated clothing immediately. If on skin, rinse well with water. Call a POISON CENTER or doctor/ physician.

### In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. Immediately call a POISON CENTER or doctor/ physician.

### If swallowed

Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.

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

None known.

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO2)

### Specific hazards during fire fighting

No information available.

### Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

### Special protective equipment for fire-fighters

Use personal protective equipment.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

### Environmental precautions

Should not be released into the environment.

### Methods and materials for containment and cleaning up

Collect as much of the spill as possible with a suitable absorbent material.

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## SECTION 7: Handling and storage

### Handling

**Technical measures**

Prevent generation of vapor or mist. Take precautionary measures against static discharge. Use explosion-proof equipment.

**Local/Total ventilation**

Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.

**Advice on safe handling**

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject to grinding, shock or friction. Wash hands and face thoroughly after handling.

**Avoidance of contact**

Oxidizing agents, Strong bases

### Storage

**Conditions for safe storage**

Keep container tightly closed. Store in a refrigerator. Keep in a well-ventilated place. Use explosion-proof equipment. Store locked up.

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

| Components | CAS RN | Value type (Form of ex- posure) | Control parameters / Permissible con- centration | Basis |
|---|---|---|---|---|
| 1,4-Dichloro-2-butene | 764-41-0 | TWA | 0.005 ppm | ACGIH |

Components CAS RN Value type Control parameters Basis (Form of ex- / Permissible conposure) centration 1,4-Dichloro-2-butene 764-41-0 TWA 0.005 ppm ACGIH

### Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

### Personal protective equipment

**Respiratory protection**

Gas mask

Self-contained breathing apparatus

**Eye/face protection**

Safety glasses

Safety goggles

Face-shield

**Skin and body protection**

Impervious protective clothing

**Hand protection**

Impervious gloves *Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

### Color

colorless - yellow

### Odor

Characteristic; sweet, pungent.

### Odor Threshold

No data available

### pH

No data available

### Melting point/freezing point

No data available

### Boiling point/boiling range

159 °C

### Flash point

54 °C

### Evaporation rate

No data available

### Flammability

No data available

### Upper explosion limit / Upper flammability limit

4 %(V)

### Lower explosion limit / Lower flammability limit

1.5 %(V)

### Vapor pressure

0.4 kPa (25 °C)

### Relative density

1.19

### Solubility(ies)

### Water solubility

580 mg/l insoluble (25 °C)

### Solubility in other solvents

completely miscible Solvent: Alcohol completely miscible Solvent: Benzene soluble Solvent: Ether

### Partition coefficient: n-octanol/water

2.6

### Autoignition temperature

No data available

### Decomposition temperature

No data available

### Viscosity

### Viscosity, dynamic

No data available

### Viscosity, kinematic

No data available

### Molecular weight

124.99 g/mol

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## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

Stable under normal conditions.

### Possibility of hazardous reactions

None under normal processing.

### Conditions to avoid

Heat. Electrical spark Open flame Electrostatic discharge

### Incompatible materials

Oxidizing agents, Strong bases

### Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO2), Hydrogen chloride gas

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## SECTION 11: Toxicological information

### Acute toxicity

### Product

### Acute oral toxicity

Assessment: The component/mixture is toxic after single ingestion.

### Acute inhalation toxicity

Assessment: The component/mixture is extremely toxic after short term inhalation.

### Acute dermal toxicity

Assessment: The component/mixture is toxic after single contact with skin.

### Components

### 1,4-Dichloro-2-butene

### Acute oral toxicity

LD50 (Rat): 89 mg/kg Assessment: The component/mixture is toxic after single ingestion.

### Acute inhalation toxicity

LCLo (Rat): 62 ppm Exposure time: 4 h Test atmosphere: gas Assessment: The component/mixture is extremely toxic after short term inhalation.

### Acute dermal toxicity

LD50 (Rabbit): 737.8 mg/kg Assessment: The component/mixture is toxic after single contact with skin.

### Skin corrosion/irritation

### Product

### Result

Causes burns.

### Components

### 1,4-Dichloro-2-butene

### Result

Causes burns.

### Serious eye damage/eye irritation

### Product

### Result

Irreversible effects on the eye

### Components

### 1,4-Dichloro-2-butene

### Result

Irreversible effects on the eye

### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2.

### Germ cell mutagenicity

### Product

### Germ cell mutagenicity - Assessment

Presumed to induce heritable mutations in the germ cells of humans.

### Components

### 1,4-Dichloro-2-butene

### Germ cell mutagenicity - Assessment

Presumed to induce heritable mutations in the germ cells of humans.

### Carcinogenicity

### Product

### Carcinogenicity - Assessment

Presumed to have carcinogenic potential for humans

### Components

### 1,4-Dichloro-2-butene

### Carcinogenicity - Assessment

Presumed to have carcinogenic potential for humans

### Reproductive toxicity

### Product

### Reproductive toxicity - Assessment

Suspected human reproductive toxicant

### Components

### 1,4-Dichloro-2-butene

### Reproductive toxicity - Assessment

Suspected human reproductive toxicant

### STOT-single exposure

### Product

### Assessment

May cause drowsiness or dizziness.

### Target Organs

Liver, Respiratory system, Kidney, Central nervous system, spleen

### Assessment

Causes damage to organs.

### Components

### 1,4-Dichloro-2-butene

### Assessment

May cause drowsiness or dizziness.

### Target Organs

Liver, Respiratory system, Kidney, Central nervous system, spleen

### Assessment

Causes damage to organs.

### STOT-repeated exposure

### Product

### Target Organs

Liver, Respiratory system

### Assessment

Causes damage to organs through prolonged or repeated exposure.

### Components

### 1,4-Dichloro-2-butene

### Target Organs

Liver, Respiratory system

### Assessment

Causes damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

Classified based on available data. For more details, see section 2.

### Aspiration toxicity

Classified based on available data. For more details, see section 2.

### RTECS No.

EM4900000 (1,4-Dichloro-2-butene)

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## SECTION 12: Ecological information

### Ecotoxicity

Product:

### Ecotoxicology Assessment

#### Acute aquatic toxicity

Very toxic to aquatic life.

#### Chronic aquatic toxicity

Very toxic to aquatic life with long lasting effects.

### Components:

### 1,4-Dichloro-2-butene:

### Ecotoxicology Assessment

**Acute aquatic toxicity**

Very toxic to aquatic life.

**Chronic aquatic toxicity**

Very toxic to aquatic life with long lasting effects.

### Persistence and degradability

No data available

### Bioaccumulative potential

### Components:

### 1,4-Dichloro-2-butene:

octanol/water

**Partition coefficient: noctanol/water**

2.6

### Mobility in soil

### Components:

### 1,4-Dichloro-2-butene:

tal compartments

**Distribution among environmental compartments**

Koc: 215

### Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### Disposal methods

**Waste from residues**

Disposal in accordance with local and national regulations. Take precautions against ignition or explode. Entrust disposal to a licensed waste disposal company.

**Contaminated packaging**

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

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## SECTION 14: Transport information

### International Regulations

### IATA-DGR

Not permitted for transport

### IMDG-Code

**UN number**

UN 3489

**Proper shipping name**

TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S.

**Class**

6.1

**Subsidiary risk**

3, 8

**Packing group**

I

**EmS Code**

F-E, S-D

### Domestic regulation

### GB 6944/12268

**UN number**

UN 3489

**Proper shipping name**

TOXIC BY INHALATION LIQUID,FLAMMABLE,CORROSIVE,N.O.S.

**Class**

6.1

**Subsidiary risk**

3, 8

**Packing group**

I

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## SECTION 15: Regulatory information

### Regulations on Safety Management of Hazardous Chemicals

**Catalogue of Hazardous Chemicals**

Listed

### Measures on the Environmental Administration of New Chemical Substances Registration

**Registration/Notification number**

B1A232214736

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk

management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### The ingredients of this product are reported in the following inventories

**CH BAGREG**

On the inventory, or in compliance with the inventory

**TSCA**

All substances listed as active on the TSCA inventory

**AICS**

On the inventory, or in compliance with the inventory

**DSL**

None of the components of this product are on the Canadian DSL, but all are on the NDSL 1,4-Dichloro-2-butene

**ENCS**

On the inventory, or in compliance with the inventory

**ISHL**

On the inventory, or in compliance with the inventory

**KECI**

Not in compliance with the inventory

**PICCS**

On the inventory, or in compliance with the inventory

**IECSC**

Not in compliance with the inventory

**NZIoC**

On the inventory, or in compliance with the inventory

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

**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.