

## Chemical Safety Data Sheet MSDS / SDS

**3-CYANOPROPYLTRICHLOROSILANE**Revision Date:2026-05-31 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : 3-CYANOPROPYLTRICHLOROSILANE  
CBnumber : CB5350173  
CAS : 1071-27-8  
EINECS Number : 213-990-6  
Synonyms : 3-Cyanopropyltrichlorosilane,DK036

**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

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**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

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

Continuerinsing.

P363 Wash contaminated clothing before reuse.

**Hazard statements**

H314 Causes severe skin burns and eye damage

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

## Substance

|              |                                       |
|--------------|---------------------------------------|
| Product name | : 3-CYANOPROPYLTRICHLOROSILANE        |
| Synonyms     | : 3-Cyanopropyltrichlorosilane, DK036 |
| CAS          | : 1071-27-8                           |
| EC number    | : 213-990-6                           |
| MF           | : C4H6Cl3NSi                          |
| MW           | : 202.54                              |

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## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Call in physician.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

Foam Water

## Specific hazards during fire fighting

Combustible. Vapors are heavier than air and may spread along floors. May not get in touch with: Water Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

## Hazardous combustion products

Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Hydrogen chloride gas silicon oxides

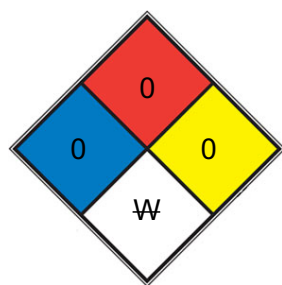
## Specific extinguishing methods

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

## NFPA 704



|              |   |                                                                                                                                                                                                                                                                                              |
|--------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ■ HEALTH     | 0 | Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials                                                                                                                                                                     |
| ■ FIRE       | 0 | Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride) |
| ■ REACT      | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N2</a> )                                                                                                                                                                      |
| □ SPEC. HAZ. | W |                                                                                                                                                                                                                                                                                              |

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### Handling

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Advice on safe handling

Keep workplace dry. Do not allow product to come into contact with water.

### Storage

#### Further information on storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.

#### Materials to avoid

Never allow product to get in contact with water during storage.

#### Storage class

8A, Combustible, corrosive hazardous materials

#### Recommended storage temperature

Recommended storage temperature see product label.

#### Further information on storage stability

Store under inert gas. Exposure to moisture.

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Recommended Filter type

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

**Skin and body protection**

protective clothing

**Hand protection**

**Material**

butyl-rubber

**Break through time**

480 min

**Glove thickness**

0.7 mm

**Protective index**

Full contact

**Manufacturer**

Butoject® (KCL 898)

**Material**

Nitrile rubber

**Break through time**

30 min

**Glove thickness**

0.4 mm

**Protective index**

Splash contact

**Manufacturer**

Camatril® (KCL 730 / Aldrich Z677442, Size M)

**Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

clear, liquid

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**Color**

colorless

**Odor**

No data available

**Odor Threshold**

No data available

## **pH**

No data available

## **Melting point/ range**

No data available

## **Boiling point/boiling range**

237 - 238 °C

## **Flash point**

92 °C

Method: closed cup

## **Evaporation rate**

No data available

## **Flammability (solid, gas)**

No data available

## **Flammability (liquids)**

No data available

## **Burning rate**

No data available

## **Upper explosion limit / Upper flammability limit**

No data available

## **Lower explosion limit / Lower flammability limit**

No data available

## **Vapor pressure**

No data available

## **Relative vapor density**

No data available

## **Relative density**

1.3 g/mL at 25 °C (lit.)

## **Density**

1.3 g/mL (25 °C)

## **Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

202.54 g/mol

**Particle characteristics Particle size**

No data available

**Physical state**

Liquid

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## SECTION 10: Stability and reactivity

**Reactivity**

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

**Chemical stability**

sensitive to moisture

**Possibility of hazardous reactions**

Violent reactions possible with: Oxidizing agents Water acids

## Conditions to avoid

Strong heating. Moisture.

## Incompatible materials

No data available

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

LD50 Oral - Rat - 2,830 mg/kg

Inhalation: No data available

Dermal: No data available

### Skin corrosion/irritation

Remarks: No data available

### Serious eye damage/eye irritation

Remarks: No data available

### Respiratory or skin sensitization

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

### Germ cell mutagenicity

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

### Carcinogenicity

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

### Reproductive toxicity

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

### Specific target organ toxicity - single exposure

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

### Specific target organ toxicity - repeated exposure

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

### Aspiration hazard

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

## 11.2 Additional Information

RTECS: VV2775000

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, Vomiting, May cause cyanosis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12: Ecological information

### Ecotoxicity

#### Components:

##### 4-(Trichlorosilyl)butyronitrile:

#### Toxicity to fish

Remarks: No data available

### Persistence and degradability

#### Components:

##### 4-(Trichlorosilyl)butyronitrile:

#### Biodegradability

Remarks: No data available

### Bioaccumulative potential

#### Components:

##### 4-(Trichlorosilyl)butyronitrile:

#### Bioaccumulation

Remarks: No data available

### Mobility in soil

#### Components:

##### 4-(Trichlorosilyl)butyronitrile:

#### Stability in soil

Remarks: No data available

### Other adverse effects

#### Components:

##### 4-(Trichlorosilyl)butyronitrile:

#### Additional ecological information

No data available

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## SECTION 13: Disposal considerations

### Disposal methods

## **Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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# **SECTION 14: Transport information**

## **International Regulations**

### **IATA-DGR**

UN/ID No. : UN 2987

Proper shipping name : Chlorosilanes, corrosive, n.o.s.

Class : 8

Packing group : II

Labels : Class 8 - Corrosive substances

Packing instruction (cargo aircraft) : 876

Packing instruction (passenger aircraft) : Not permitted for transport

### **IMDG-Code**

UN number : UN 2987

Proper shipping name : CHLOROSILANES, CORROSIVE, N.O.S.

Class : 8

Packing group : II

Labels : 8

EmS Code : F-A, S-B

Marine pollutant : no

## **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

National regulation

### **JT/T 617**

UN number : UN 2987

Proper shipping name : CHLOROSILANES, CORROSIVE, N.O.S.

Class : 8

Packing group : II

Labels : 8

Environmentally hazardous : no

## **Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15: Regulatory information

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.

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.

### **National regulatory information**

#### **Regulations on Safety Management of Hazardous Chemicals**

##### **Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)**

Not listed

##### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

##### **Catalogue of Specially Controlled Hazardous**

Not listed Chemicals

##### **List of Explosive Precursors**

Not listed

##### **Regulations on Occupational Labor Protection in the at workplaces where**

##### **Toxic Substances Are Used**

##### **Catalogue of Highly Toxic Chemicals**

Not listed

##### **Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

##### **China Severely Restricted Toxic Chemicals for Import and Export**

Not listed

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

##### **Registration/Notification number**

B1A222210701 B1A222223608

##### **Regulation on the Administration of Precursor Chemicals**

##### **Catalogue and Classification of Precursor Chemicals**

Not listed

##### **Regulations on the Administration of Controlled Chemicals**

## List of Controlled Chemicals

Not listed

## Regulations of Ozone Depleting Substances Management

### List of Controlled Ozone Depleting Substances

Not listed

### List of Controlled Ozone Depleting Substances Import and Export

Not listed

## Environmental Protection Law

### List of Priority Controlled Chemicals

Not listed

### List of Key Controlled New Pollutants

Not listed

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## SECTION 16: Other information

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonized System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods  
 IMO - International Maritime Organization  
 ISHL -Industrial Safety and Health Law (Japan)  
 ISO - International Organisation for Standardization  
 KECI - Korea Existing Chemicals Inventory  
 LC50 - Lethal Concentration to 50 % of a test population  
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
 MARPOL - International Convention for the Prevention of Pollution from Ships  
 n.o.s. - Not Otherwise Specified  
 Nch - Chilean Norm  
 NO(A)EC -No Observed (Adverse) Effect Concentration  
 NO(A)EL - No Observed (Adverse) Effect Level  
 NOELR - No Observable Effect Loading Rate  
 NOM - Official Mexican Norm  
 NTP - National Toxicology Program  
 NZIoC - New Zealand Inventory of Chemicals  
 OECD - Organization for Economic Co-operation and Development  
 OPPTS - Office of Chemical Safety and Pollution Prevention  
 PBT - Persistent, Bioaccumulative and Toxic substance  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 (Q)SAR - (Quantitative) Structure Activity Relationship  
 REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 SADT - Self-Accelerating Decomposition Temperature  
 SDS - Safety Data Sheet  
 TCSI - Taiwan Chemical Substance Inventory  
 TDG - Transportation of Dangerous Goods  
 TECI -Thailand Existing Chemicals Inventory  
 TSCA - Toxic Substances Control Act (United States)  
 UN - United Nations  
 UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods  
 vPvB - Very Persistent and Very Bioaccumulative  
 WHMIS - Workplace Hazardous Materials Information System

**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.