

## Chemical Safety Data Sheet MSDS / SDS

## Difurfuryldisulfide

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

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

**Product identifier**

Product name : Difurfuryldisulfide  
CBnumber : CB9771367  
CAS : 4437-20-1  
EINECS Number : 224-649-6  
Synonyms : DIFURFURYL DISULFIDE,Furfuryl Disulfide

**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

Warning

**Precautionary statements**

P501 Dispose of contents/container to.....

P330 Rinse mouth.

P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P270 Do not eat, drink or smoke when using this product.

P264 Wash skin thoroughly after handling.

**Hazard statements**

H302 Harmful if swallowed

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: Difurfuryldisulfide
Synonyms	: DIFURFURYL DISULFIDE, Furfuryl Disulfide
CAS	: 4437-20-1
EC number	: 224-649-6
MF	: C10H10O2S2
MW	: 226.32

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## SECTION 4: First aid measures

### General advice

Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air.

### In case of skin contact

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

### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 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

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

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Specific hazards during fire fighting

Combustible. Vapors are heavier than air and may spread along floors. 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 Sulfur oxides

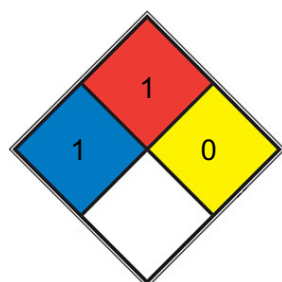
### Specific extinguishing methods

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

In the event of fire, wear self-contained breathing apparatus.

### NFPA 704



■ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion

■ FIRE 1 can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

■ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

□ SPEC.

□ HAZ.

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## 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. 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. Chemisorb®). Dispose of properly. Clean up affected area.

## SECTION 7: Handling and storage

### Handling

#### Avoidance of contact

Strong oxidizing agents Strong bases

### Storage

#### Further information on storage conditions

Tightly closed.

#### Storage class

10, Combustible liquids

#### Recommended storage temperature

Recommended storage temperature see product label.

#### Further information on storage stability

Light sensitive. Stench.

#### Packaging material

Suitable material: Amber Glass Bottle/Jar

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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).

Safety glasses

#### Skin and body protection

protective clothing

#### Hand protection

#### Material

Nitrile rubber

**Break through time**

480 min

**Glove thickness**

0.11 mm

**Protective index**

Full contact

**Manufacturer**

(KCL 740 / Aldrich Z677272, Size M)

**Material**

Nitrile rubber

**Break through time**

480 min

**Glove thickness**

0.11 mm

**Protective index**

Splash contact

**Manufacturer**

(KCL 740 / Aldrich Z677272, 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**

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

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## SECTION 9: Physical and chemical properties

**Information on basic physicochemical properties**

liquid

**Color**

Colorless to Yellow

**Odor**

Stench.

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

10 - 11 °C

Method: lit.

### **Boiling point/boiling range**

112 - 115 °C (0.7 hPa)

Method: lit.

### **Flash point**

113 °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**

1.233 g/mL at 25 °C (lit.)

### **Density**

1.233 g/mL (25 °C)

Method: lit.

### **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**

No data available

**Oxidizing properties**

No data available

**Molecular weight**

226.32 g/mol

**Particle characteristics Particle size**

No data available

**Physical state**

clear 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**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

Violent reactions possible with: Strong oxidizing agents

**Conditions to avoid**

Strong heating.

## Incompatible materials

Strong oxidizing agents Strong bases

## 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

Acute toxicity estimate Oral - 500.1 mg/kg (Expert judgment)

Remarks: The value / statement given is based on a (Q)SAR approach

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

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

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# SECTION 12: Ecological information

## Ecotoxicity

### Components:

## **2,2'-[Dithiobis(methylene)]bisfuran:**

### **Toxicity to fish**

Remarks: No data available

### **Persistence and degradability**

### **Components:**

## **2,2'-[Dithiobis(methylene)]bisfuran:**

### **Biodegradability**

Remarks: No data available

### **Bioaccumulative potential**

### **Components:**

## **2,2'-[Dithiobis(methylene)]bisfuran:**

### **Bioaccumulation**

Remarks: No data available

### **Mobility in soil**

### **Components:**

## **2,2'-[Dithiobis(methylene)]bisfuran:**

### **Stability in soil**

Remarks: No data available

### **Other adverse effects**

### **Components:**

## **2,2'-[Dithiobis(methylene)]bisfuran:**

### **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 3334

Proper shipping name : Aviation regulated liquid, n.o.s.

(2,2'-[Dithiobis(methylene)]bisfuran)

Class : 9

Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

Packing instruction (cargo aircraft) : 964

Packing instruction (passenger aircraft) : 964

### IMDG-Code

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

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 : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

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 and it does not meet the definition of hazardous chemicals and its principles of determination.

## **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

### **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

AllC - 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

ATA - 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

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - 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.