

## Chemical Safety Data Sheet MSDS / SDS

## Allyl Propyl Disulfide

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

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

## Product identifier

Product name : Allyl Propyl Disulfide  
CBnumber : CB4448532  
CAS : 2179-59-1  
EINECS Number : 218-550-7  
Synonyms : Onion Oil, Allyl Propyl 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

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P370+P378 In case of fire: Use ... for extinction.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

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

#### **Hazard statements**

H226 Flammable liquid and vapour

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H335 May cause respiratory irritation

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Allyl Propyl Disulfide
Synonyms	: Onion Oil, Allyl Propyl disulfide
CAS	: 2179-59-1
EC number	: 218-550-7
MF	: C6H12S2
MW	: 148.29

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## SECTION 4: First aid measures

### **First Aid Measures**

#### **General advice**

If symptoms persist, call a physician.

#### **Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

#### **Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

#### **Inhalation**

Remove to fresh air. If symptoms persist, call a physician. Artificial respiration and/or oxygen may be necessary. Call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

#### **Ingestion**

Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

#### **Self-protection of the first aider**

Use personal protective equipment as required.

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

### Symptoms

No information available.

### Indication of any immediate medical attention and special treatment needed

### Note to physicians

Treat symptomatically.

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## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

No information available.

### Specific hazards arising from the chemical

#### Specific hazards arising from the chemical

No information available.

#### Hazardous combustion products

Hydrogen sulfide. Carbon oxides.

### Explosion data

#### Sensitivity to Mechanical Impact

No information available.

#### Sensitivity to Static Discharge

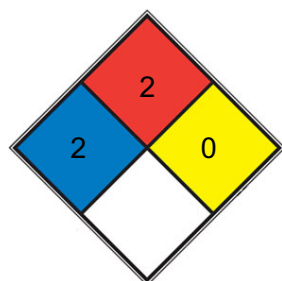
No information available.

### Protective equipment and precautions for firefighters

#### Protective equipment and precautions for firefighters

As in any fire, wear self contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA 704



**HEALTH 2** Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

**FIRE 2** Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

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REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### Personal precautions

Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### Environmental precautions

##### Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.

Prevent product from entering drains. See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

#### Methods for containment

Prevent further leakage or spillage if safe to do so.

#### Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

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## SECTION 7: Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation.

Do not breathe dust/fume/gas/mist/vapors/spray.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Store at 4 °C.

#### Incompatible materials

None known based on information supplied.

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## SECTION 8: Exposure controls/personal protection

## Control parameters

## Exposure Guidelines

## Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Column 1	Column 2	Column 3	Column 4
Allyl propyl disulfide 2179-59-1	TWA: 0.5 ppm	TWA: 2 ppm TWA: 12 mg/m <sup>3</sup> (vacated) TWA: 2 ppm (vacated) TWA: 12 mg/m <sup>3</sup> (vacated) STEL: 18 mg/m <sup>3</sup> STEL: 3 ppm	TWA: 2 ppm TWA: 12 mg/m <sup>3</sup> STEL: 3 ppm STEL: 18 mg/m <sup>3</sup>

NIOSH IDLH Immediately Dangerous to Life or Health

## Appropriate engineering controls

### Engineering Controls

Showers  
Eyewash stations  
Ventilation systems

## Individual protection measures, such as personal protective equipment

### Eye/face protection

Tight sealing safety goggles. Face protection shield.

### Skin and Body Protection

Wear protective gloves and protective clothing.

### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

### General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical State	liquid
Appearance	No information available
Odor	Powerful onionlike-garlic-like odor.
pH	No information available
Melting point/freezing point	-15 °C
Boiling point	69 °C

Flash point	56 °C
Liquid Density	0.99 g/mL
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	50 mmHg
Vapor density	5.1
Specific gravity	0.99
Water solubility	Insoluble. <0.1 g/100 mL at 20 °C
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density and/or relative density	0.99
Colour	Colorless to Light yellow to Light orange

## SECTION 10: Stability and reactivity

### Reactivity

Not applicable

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

No information available.

### Conditions to avoid

Extremes of temperature and direct sunlight.

### Incompatible materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Hydrogen sulfide. Carbon oxides.

## SECTION 11: Toxicological information

## **Information on likely routes of exposure**

### **Inhalation**

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

### **Eye contact**

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

### **Skin Contact**

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

### **Ingestion**

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

## **Information on toxicological effects**

### **Symptoms**

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

## **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

### **Chronic Toxicity**

Avoid repeated exposure. Target Organ Effects Eyes, Respiratory system.

## **Numerical measures of toxicity - Product Information**

### **Unknown acute toxicity**

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

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## SECTION 12: Ecological information

### **Ecotoxicity**

May cause long lasting harmful effects to aquatic life

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### **Persistence and degradability**

No information available.

### **Bioaccumulation**

No information available.

### **Mobility**

No information available.

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## SECTION 13: Disposal considerations

### **Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Contaminated packaging

Do not reuse container.

## Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

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## SECTION 14: Transport information

### DOT

**UN/ID no**

UN1993

**Hazard Class**

3

**Packing Group**

III

Flammable liquids, n.o.s.

UN1993, Flammable liquids, n.o.s., 3, III

**Emergency Response Guide Number**

128

### IMDG

**UN/ID no**

UN1993

**Hazard Class**

3

**Packing Group**

III

Flammable liquid, n.o.s.

UN1993, Flammable liquid, n.o.s., 3, III, (56°C c.c.)

**Special Provisions**

223, 274, 955

**EmS-No**

F-E, S-E

### IATA

**UN/ID no**

UN1993

**Hazard Class**

3

**Packing Group**

III

Flammable liquid, n.o.s.

UN1993, Flammable liquid, n.o.s., 3, III

**ERG Code**

3L

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**SECTION 15: Regulatory information****International Inventories**

All of the components in the product are on the following Inventory lists

Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL):

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Allyl propyl disulfide	-	X	-	X	-	-	-	X	-	X

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories****Acute health hazard**

Yes

**Chronic Health Hazard**

No

**Fire hazard**

Yes

**Sudden release of pressure hazard**

No

**Reactive hazard**

No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Allyl propyl disulfide 2179-59-1	X	X	X

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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.