

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 1 of 8

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

##### 1.1. Product identifier

NATURAL DIALLYL DISULFIDE

Substance name: NATURAL DIALLYL DISULFIDE  
 CAS No: 2179-57-9

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

###### Use of the substance/mixture

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

##### 1.3. Details of the supplier of the safety data sheet

Company name:	Axxence Aromatic GmbH	
Street:	Tackenweide 28	
Place:	D-46446 Emmerich am Rhein	
Telephone:	+ 49 2822 68561 0	Telefax: + 49 2822 68561 39
E-mail:	info@axxence.com	
Contact person:	Safety Team	Telephone: + 49 2822 68561 0
E-mail:	safety-documentation@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	Safety Management	

##### 1.4. Emergency telephone number:

+49 2822 68561 99

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### UN GHS (ST/SG/AC.10/11/Rev.10)

Flammable liquid: Flam. Liq. 3  
 Acute toxicity: Acute Tox. 3 (oral)  
 Acute toxicity: Acute Tox. 5 (dermal)  
 Skin corrosion/irritation: Skin Irrit. 2  
 Serious eye damage/eye irritation: Eye Irrit. 2  
 Respiratory or skin sensitisation: Skin Sens. 1

##### 2.2. Label elements

###### UN GHS (ST/SG/AC.10/11/Rev.10)

Signal word: Danger

Pictograms:



###### Hazard statements

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H313	May be harmful in contact with skin.
H315+H319	Causes skin irritation and serious eye irritation.
H317	May cause an allergic skin reaction.

###### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 2 of 8

P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P333+P317	If skin irritation or rash occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P317	If eye irritation persists: Get medical help.
P370+P378	In case of fire: Use Water spray jet, alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2) to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to organic waste.

#### 2.3. Other hazards

This substance is not listed as Substance of Very High Concern (SVHC) in the Candidate List according to REACH, Article 59.

This substance is not identified as SVHC (substance of very high concern) and is not subject to authorisation according to Annex XIV of REACH.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula:	C6 H10 S2
Molecular weight:	146,28 g/mol

#### Relevant ingredients

CAS No	Chemical name	Quantity
	Classification (UN GHS (ST/SG/AC.10/11/Rev.10))	
2179-57-9	NATURAL DIALLYL DISULFIDE	100 %
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 5, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H226 H301 H313 H315 H319 H317	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

##### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

##### After ingestion

Rinse mouth immediately and drink 1 glass of water. Induce vomiting when the affected person is not

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 3 of 8

unconscious. Call a physician immediately.

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

No information available.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

### SECTION 5: Firefighting measures

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

#### **5.2. Special hazards arising from the substance or mixture**

Flammable. Vapours can form explosive mixtures with air.

#### **5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### **Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### **6.1. Personal precautions, protective equipment and emergency procedures**

##### **General advice**

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### **6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

#### **6.3. Methods and material for containment and cleaning up**

##### **For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

##### **Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### SECTION 7: Handling and storage

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### **Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

##### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat,

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 4 of 8

drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### **Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

##### **Hints on joint storage**

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls



#### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### **Individual protection measures, such as personal protective equipment**

##### **Eye/face protection**

Suitable eye protection: goggles.

##### **Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable gloves type: Disposable gloves + NBR (Nitrile rubber)

##### **Skin protection**

Use of protective clothing.

##### **Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:		
Odour:	, garlic	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		180 °C
Flammability:		not applicable
		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 5 of 8

Flash point:	51 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Water solubility: (at 25 °C)	0,071 g/l
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	3,5
Vapour pressure: (at 20 °C)	1 hPa
Density (at 20 °C):	1,008 g/cm <sup>3</sup>
Relative vapour density:	3,94

#### **9.2. Other information**

##### **Information with regard to physical hazard classes**

Explosive properties

The product is not: Explosive. not explosive according to EU A.14

Oxidizing properties

The product is not: oxidising.

##### **Other safety characteristics**

Evaporation rate:

not determined

Solid content:

not determined

### SECTION 10: Stability and reactivity

#### **10.1. Reactivity**

Flammable.

#### **10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

#### **10.3. Possibility of hazardous reactions**

No known hazardous reactions.

#### **10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

#### **10.5. Incompatible materials**

No information available.

#### **10.6. Hazardous decomposition products**

No known hazardous decomposition products.

### SECTION 11: Toxicological information

#### **11.1. Information on toxicological effects**

##### **Acute toxicity**

Toxic if swallowed.

May be harmful in contact with skin.

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 6 of 8

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2179-57-9	NATURAL DIALLYL DISULFIDE				
	oral	LD50 mg/kg 260	Rat	GESTIS	
	dermal	LD50 mg/kg 3600	Rabbit	GESTIS	

#### Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye irritation.

#### Sensitising effects

May cause an allergic skin reaction. (NATURAL DIALLYL DISULFIDE)

#### Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
2179-57-9	NATURAL DIALLYL DISULFIDE	3,5

### 12.4. Mobility in soil

The product has not been tested.

### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

### 12.7. Other adverse effects

No information available.

### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

## Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.10)

### NATURAL DIALLYL DISULFIDE

Revision date: 03.04.2025

Product code: 202800

Page 7 of 8

#### Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Marine transport (IMDG)

**14.1. UN number or ID number:** UN 1992  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3+6.1



Special Provisions: 223, 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-E, S-D

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:** UN 1992  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3+6.1



Special Provisions: A3  
 Limited quantity Passenger: 2 L  
 Passenger LQ: Y343  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 355  
 IATA-max. quantity - Passenger: 60 L  
 IATA-packing instructions - Cargo: 366  
 IATA-max. quantity - Cargo: 220 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

Warning: Combustible liquid. Acute Toxicity.

#### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

### SECTION 15: Regulatory information

#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

**Safety Data Sheet**

according to UN GHS (ST/SG/AC.10/11/Rev.10)

**NATURAL DIALLYL DISULFIDE**

Revision date: 03.04.2025

Product code: 202800

Page 8 of 8

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,2,4,5,6,7,8,9,10,11,13,14,15,16.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.