

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL DIFURFURYL DISULFIDE

Revision date: 13.01.2023

Product code: 314600

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

##### 1.1. Product identifier

NATURAL DIFURFURYL DISULFIDE

Substance name: NATURAL DIFURFURYL DISULFIDE  
 CAS No: 4437-20-1  
 EC No: 224-649-6

##### 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:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

##### 1.4. Emergency telephone number:

+49 2822 68561 99

#### SECTION 2: Hazards identification

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

###### Regulation (EC) No 1272/2008

Acute Tox. 4; H302

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



###### Hazard statements

H302 Harmful if swallowed.

###### Precautionary statements

P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P330 Rinse mouth.  
 P501 Dispose of contents/container to .

##### 2.3. Other hazards

No information available.

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

##### 3.1. Substances

Sum formula: C<sub>10</sub> H<sub>10</sub> O<sub>2</sub> S<sub>2</sub>  
 Molecular weight: 226,32

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
4437-20-1	NATURAL DIFURFURYL DISULFIDE			100 %
	224-649-6			
	Acute Tox. 4; H302			

Full text of H and EUH statements: see section 16.

##### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
4437-20-1	224-649-6	NATURAL DIFURFURYL DISULFIDE	100 %
	oral: ATE = 500 mg/kg		

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### After inhalation

Provide fresh air.

###### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

###### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

###### After ingestion

Rinse mouth immediately and drink 1 glass of of water. Medical treatment necessary.

##### 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

Co-ordinate fire-fighting measures to the fire surroundings.

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

Non-flammable.

##### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

##### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.  
 Do not allow entering drains or surface water.

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#### SECTION 6: Accidental release measures

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

###### General advice

Provide adequate ventilation. 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 to enter into surface water or drains.

##### 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

No special fire protection measures are necessary.

###### 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, 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.

###### Hints on joint storage

No special measures are necessary.

##### 7.3. Specific end use(s)

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

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

##### 8.2. Exposure controls

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

###### Eye/face protection

Wear eye/face protection.

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#### 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:	
Colour:	
Melting point/freezing point:	10 °C
Boiling point or initial boiling point and boiling range:	229 °C
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Water solubility: (at 25 °C)	0,01156 g/L
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	4,03
Vapour pressure:	not determined
Density (at 20 °C):	1,23 g/cm <sup>3</sup>
Relative vapour density: (at 20 °C)	7,7

### 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
Solvent content:	0%
Solid content:	0%

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2. Chemical stability

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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**

none

#### **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 hazard classes as defined in Regulation (EC) No 1272/2008**

##### **Acute toxicity**

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
4437-20-1	NATURAL DIFURFURYL DISULFIDE				
	oral	ATE 500 mg/kg			

##### **Irritation and corrosivity**

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

##### **Sensitising effects**

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

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

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.

#### **11.2. Information on other hazards**

##### **Endocrine disrupting properties**

No information available.

##### **Further information**

This substance is classified as hazardous according to Regulation (EC) No 1272 (2008).

### 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.

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#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
4437-20-1	NATURAL DIFURFURYL DISULFIDE	4,03

#### 12.4. Mobility in soil

The product has not been tested.

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

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.

##### List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

##### List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

##### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

##### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 3334
<u>14.2. UN proper shipping name:</u>	Aviation regulated liquid, n.o.s.
<u>14.3. Transport hazard class(es):</u>	9
<u>14.4. Packing group:</u>	-
Classification code:	M11

#### Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	UN 3334
<u>14.2. UN proper shipping name:</u>	AVIATION REGULATED LIQUID, N.O.S.
<u>14.3. Transport hazard class(es):</u>	9
<u>14.4. Packing group:</u>	N-S
Classification code:	M11

#### Marine transport (IMDG)

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<b>14.1. UN number or ID number:</b>	UN 3334
<b>14.2. UN proper shipping name:</b>	AVIATION REGULATED LIQUID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	-
Hazard label:	9



Special Provisions:	960
Limited quantity:	-
Excepted quantity:	-
EmS:	-

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

<b>14.1. UN number or ID number:</b>	UN 3334
<b>14.2. UN proper shipping name:</b>	AVIATION REGULATED LIQUID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9



Special Provisions:	A27
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y964
Excepted quantity:	E1
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

No information available.

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

not applicable

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2004/42/EC (VOC): 100 % (1230 g/l)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):

##### Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

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Water hazard class (D): 3 - highly hazardous to water

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

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

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

**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).

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.

**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



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for adhering to existing laws and regulations.

#### Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1		-	4	28	-	-	-	-	Flavour

LCS: Life cycle stages

PC: Product categories

ERC: Environmental release categories

TF: Technical functions

SU: Sectors of use

PROC: Process categories

AC: Article categories