

## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### NATURAL DIFURFURYL DISULFIDE 10% IN ETHANOL

Revision date: 27.04.2026

Product code: 314610

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## 1. Identification

### Product identifier

NATURAL DIFURFURYL DISULFIDE 10% IN ETHANOL

### Recommended use of the chemical and restrictions on use

#### Use of the substance/mixture

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

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

#### Manufacturer

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	

#### Supplier

Company name:	Axxence Corporation	
Street:	1050 Cypress Creek Road	
Place:	USA-71463 Oakdale, LA	
Telephone:	318-215-1456	Telefax: 318-335-1579
E-mail:	customerservice-usa@axxence.com	
Internet:	www.axxence.com	

**Emergency phone number:** EMERGENCY 24 HOUR CONTACT

ChemTrec: 1-800-424-9300

Contract # 219030

## 2. Hazard(s) identification

### Classification of the chemical

#### 29 CFR Part 1910.1200

Flammable liquids: Category 2  
 Acute toxicity: Category 3 (inhalation)  
 Serious eye damage/eye irritation: Category 2A

### Label elements

#### 29 CFR Part 1910.1200

Signal word: Danger

Pictograms:



### Hazard statements

Highly flammable liquid and vapor



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Causes serious eye irritation

Toxic if inhaled

#### Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash hands thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use alcohol resistant foam / Carbon dioxide (CO<sub>2</sub>) / Extinguishing powder to extinguish.

Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container to Organic waste.

### 3. Composition/information on ingredients

#### Mixtures

##### Relevant ingredients

CAS No	Components	Quantity
64-17-5	ethanol, ethyl alcohol	87,5 - 90 %
4437-20-1	NATURAL DIFURFURYL DISULFIDE	10-12,5%

### 4. First-aid measures

#### Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

##### After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

##### After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. 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

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.



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

No information available.

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

Treat symptomatically.

### 5. Fire-fighting measures

#### **Extinguishing media**

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

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

#### **Specific hazards arising from the chemical**

Highly flammable. Vapors may form explosive mixtures with air.

#### **Special protective equipment and precautions for fire-fighters**

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

#### **Additional information**

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

### 6. Accidental release measures

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

##### **General advice**

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

#### **Environmental precautions**

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

#### **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.

#### **Reference to other sections**

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

### 7. Handling and storage

#### **Precautions for safe handling**

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

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

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

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

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

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash

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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.

#### 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.

## 8. Exposure controls/personal protection

#### Control parameters

##### Exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	Category	Origin
64-17-5	Ethanol	1000	1880	STEL (15 min)	ACGIH-2025
64-17-5	Ethyl alcohol (Ethanol)	1000	1900	TWA (8 h)	REL
64-17-5	Ethyl alcohol	1000	1900	TWA (8 h)	REL

#### Exposure controls



##### Appropriate engineering controls

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

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

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

Suitable gloves type: Butyl caoutchouc (butyl rubber) / FKM (fluoro rubber)

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: Butyl caoutchouc (butyl rubber) / FKM (fluoro rubber)

Suitable gloves type Disposable gloves + NBR (Nitrile rubber)

##### Skin protection

Use of protective clothing.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

##### Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing.

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### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Physical state:	
Color:	clear, yellow to amber
Melting point/freezing point:	10 °C
Boiling point or initial boiling point and boiling range:	78 °C
Flammability:	not determined
Lower explosion limits:	3,1 vol. %
Upper explosion limits:	27,7 vol. %
Flash point:	13 °C
Auto-ignition temperature:	386 °C
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility:	easily soluble
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapor pressure:	58 hPa
(at 20 °C)	
Vapor pressure:	293 hPa
(at 50 °C)	
Density (at 20 °C):	0,82 g/cm <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	not applicable

#### Other information

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

- Explosive properties  
not explosive according to EU A.14
- Oxidizing properties  
The product is not: oxidising.

##### Other safety characteristics

Evaporation rate:	not determined
Solvent content:	90,00 %

### 10. Stability and reactivity

#### Reactivity

Highly flammable.

#### Chemical stability

The product is stable under storage at normal ambient temperatures.

#### Possibility of hazardous reactions

No known hazardous reactions.

#### Conditions to avoid

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

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### Incompatible materials

No information available.

### Hazardous decomposition products

No known hazardous decomposition products.

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Toxic if inhaled

#### ATEmix calculated

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 10470 mg/kg	Rat	REACH Dossier	OECD 401
	dermal	LD50 17100 mg/kg	Rabbit	REACH Dossier	
	inhalation (4 h) vapour	LC50 121 mg/l	Rat	REACH Dossier	OECD 403
4437-20-1	NATURAL DIFURFURYL DISULFIDE				
	oral	ATE 500 mg/kg			
	inhalation vapour	LC50 0,19 mg/l	Rat	Symrise (RIFM dissemination portal)	
	inhalation dust/mist	ATE 0.05 mg/l			

#### Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

#### Sensitizing effects

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

#### 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.

#### Specific target organ toxicity (STOT) - single exposure

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

#### Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

#### Aspiration hazard

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

### Information on other hazards

#### Endocrine disrupting properties

No information available.

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#### Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Specific hazards arising from the chemical!

### 12. Ecological information

#### Ecotoxicity

The product is not: Ecotoxic.

#### Persistence and degradability

The product has not been tested.

#### Bioaccumulative potential

The product has not been tested.

#### Mobility in soil

The product has not been tested.

#### Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 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.

### 13. Disposal considerations

#### 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.

##### Contaminated packaging

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

### 14. Transport information

#### U.S. DOT 49 CFR 172.101

##### UN number or ID number:

UN 1992

##### Proper shipping name:

FLAMMABLE LIQUIDS, TOXIC, N.O.S.

##### Transport hazard class(es):

3

##### Packing group:

II

Hazard label:

3, 6.1



#### Marine transport (IMDG)

##### UN number or ID number:

UN 1992

##### UN proper shipping name:

FLAMMABLE LIQUID, TOXIC, N.O.S.

##### Transport hazard class(es):

3

##### Packing group:

II

Hazard label:

3+6.1

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Special Provisions: 274  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-E, S-D

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

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



Special Provisions: A3  
 Limited quantity Passenger: 1 L  
 Passenger LQ: Y341  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 352  
 IATA-max. quantity - Passenger: 1 L  
 IATA-packing instructions - Cargo: 364  
 IATA-max. quantity - Cargo: 60 L

#### Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### Special precautions for user

Warning: Combustible liquid. Acute Toxicity.

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

not applicable

## 15. Regulatory information

### U.S. Regulations

#### National regulatory information

SARA Section 311/312 Hazards:  
 ethanol, ethyl alcohol (64-17-5): Fire hazard, Immediate (acute) health hazard  
 NATURAL DIFURFURYL DISULFIDE (4437-20-1): Immediate (acute) health hazard

#### State Regulations

##### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. Other information

### Changes

Revision date: 27.04.2026  
 Revision No: 100  
 This data sheet contains changes from the previous version in section(s): 1,2,9,11.

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### 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).  
 EC/EEC: European Community/European Economic Community  
 EU: European Union  
 M-factor: Multiplication factor  
 IATA: International Air Transport Association  
 DGR: Dangerous Goods Regulations  
 ICAO: International Civil Aviation Organization  
 TI: Technical Instructions  
 VOC: volatile organic compound

### Other data

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

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adhering to existing laws and regulations.

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*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*