

HEALTH	0
FLAMMABILITY	1
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Difurfuryl Sulfide 1% in ETOH, Natural
Product Number	0323800
CAS-No.	13678-67-6 / 64-17-5

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992
Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquid (Category 2), H225
Skin irritation (Category 2), H315
Eye irritation (Category 2A) H319
Specific target organ toxicity (Category 3) H335

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement

DANGER

Hazard Statement(s)

H225 Highly flammable liquid and vapor
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P233 Keep container tightly closed

- P240 Ground/bond container and receiving equipment
 P241 Use explosion proof electrical/ventilating/lighting/equipment
 P242 Use only non sparking tools
 P243 Take precautionary measures against static discharge
 P280 Wear protective gloves/protective clothing/eye and face protection
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P370+P378 In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction
 P403+P235 Store in a well ventilated place. Keep cool
 P405 Store locked up
 P501 Dispose of contents/container to an approved waste disposal plant
- P261 Avoid breathing dust/fume.gas/mist/vapors/spray
 P264 Wash skin thoroughly after handling
 P271 Use only outdoors or in a well-ventilated area
 P280 Wear protective gloves/eye protection/face protection
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P332+P313 If skin irritation occurs: Get medical advice/attention
 P337+P313 If eye irritation persists; get medical advice/attention
 P362 Take off contaminated clothing and wash before reuse

2.3 HNOC (Hazards not otherwise classified or not covered by GHS -None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances	Difurfuryl Sulfide and Ethyl Alcohol (Ethanol Solution)
Synonyms	
Formula	C ₁₀ H ₁₀ O ₂ S
Molecular Weight	194.25 g/mol
CAS-No	13678-67-6/64-17-5
EC-No.	237-172-3/200-578-6
Index No. Ethyl Alcohol	603-002-00-5

Hazardous Components

Component	Classification	Concentration
Ethanol	Flammable Liquid (2) H225	99%

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation	If breathed in, move person into fresh air; keep at rest and at a comfortable position to breathe. Consult a physician.
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water and contact a physician.

Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 as a precaution and consult a physician.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Clothing contamination:	Remove contaminated clothing and wash before reuse.
4.2 Most important symptoms and effects both acute and delayed	See section 2.2 and or section 11
4.3 Indication of any immediate medical attention and special treatment needed.	No data available

Section 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
5.2 Special hazards arising from the substance or mixture	Carbon oxides, sulphur oxides.
5.3 Advice for fire fighters	Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions.
5.4 Further information	Use water spray to cool unopened containers.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe area. Avoid breathing dust. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
6.2 Environment precautions	Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
6.3 Methods and materials for containment and clean up	Contain spillage. Soak up with absorbent material. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.
6.4 Specific end use(s)	Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charges.
7.2 Conditions for Safe storage	Keep container tightly closed in a dry and well-ventilated place.

7.3 **Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS No	Value	Control Parameters	Basis	
Ethyl Alcohol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)	
		Remarks: Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans			
		TWA	1,000 pp, 1,900 mg/m3	USA. Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants	
		The value in mg/m3 is approximate			
		TWA	1,000 pp, 1,900 mg/m3	USA. NIOSHA Recommended Exposure Limits	

8.2 Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practices.
Wash hands before breaks and at the end of the day.

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario.

Eye/face protection	Wear appropriate safety glasses with side shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection	Wear chemically resistant, rubber gloves when handling this product.. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.
Body protection	Impervious clothing protecting against chemicals, should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Respiratory protection	For nuisance exposure use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a Appearance Clear, pale yellow to brown liquid

Safety Data Sheet

b	Odor	Meaty, Powerful sulfur odor
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	No data available
f	Boiling Point	78°C
g	Flash Point	14°C closed cup
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density at 25°C	0.785-0.825
n	Solubility	Soluble in water and most organic solvents
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available
q	Decomposition Temp.	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical Stability	Stable under recommended storage conditions
10.3 Possibility of Hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	Strong oxidizing agents
10.6 Hazardous decomposition products	No data available
10.7 Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

LD50-Oral	No data available
LC50-Inhalation	No data available
LD50-Dermal	No data available

Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available

Carcinogenicity

IARC No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

	NTP	No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
	OSHA	No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity		No data available
Teratogenicity		No data available
Specific target organ toxicity-single exposure (GHS)		Inhalation – May cause respiratory irritation
Specific target organ toxicity-repeated exposures (GHS)		No data available
Aspiration Hazards		No data available
Signs and Symptoms of Exposure		Nausea, Headache, Vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effect		No data available
RTECS:		Not available

Section 12: ECOLOGICAL INFORMATION

12.1	Toxicity	No data available
12.2	Persistence and degradability	No data available
12.3	Bioaccumulative potential	No data available
12.4	Mobility in soil	No data available
12.5	Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required / not conducted
12.6	Other adverse effects	No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1	Disposal methods	
	Product:	According to local regulations
	Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	NA-Number: 3335	Class: 9	Packing Group: III
Proper shipping name:	A Aviation regulated solid, n.o.s. (2'2'-[Thiobis(methylene)]bisfuran)		
IMDG	Not dangerous goods		
IATA	NA-Number: 3335	Class: 9	Packing Group: III
Proper shipping name:	A Aviation regulated solid, n.o.s. (2'2'-[Thiobis(methylene)]bisfuran)		

Section 15: REGULATORY INFORMATION

Reach No.	A registration number is not available for this substance as its uses are exempted from registration, the annual tonnage not require a registration or the registration is envisaged for a later registration deadline.
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that

Safety Data Sheet

exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right to Know
components

No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know components

(2'2'-[Thiobis(methylene)]bisfuran) CAS# 13678-67-6 Rev. Date:

New Jersey Right to Know components

(2'2'-[Thiobis(methylene)] bisfuran) CAS# 13678-67-6 Rev. Date:

California Prop. 65 components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard 0
Chronic Health Hazard
Flammability 1
Physical Hazard 0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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