



GARLIC OIL 206859

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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Version: 1.1

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

1.1. Product identifier

Product form : Substance
Substance name : GARLIC OIL 206859
EC no : 232-371-1
CAS No : 8000-78-0 / 8008-99-9
Product group : Essential oil

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

EXAFLOR
5 rue des Pyrénées
94653 Rungis Cedex - France
T +33 (0)1 41 73 23 10 - F +33 (0)1 41 73 23 19
exaflor@orange.fr - www.exaflor.fr

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
	ORFILA (FRANCE)		+33 1 45 42 59 59	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226

Acute toxicity (oral), Category 4 H302

Skin corrosion/irritation, Category 2 H315

Sensitisation — Skin, Category 1 H317

Full text of H statements : see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof ventilating equipment
P261 - Avoid breathing dust, fume, mist, vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing should not be allowed out of the workplace

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P280 - Wear protective clothing, protective gloves, eye protection
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of water
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P321 - Specific treatment (see Read label before use on this label)
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use carbon dioxide (CO₂), dry extinguishing powder to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to contents/container to agreed companies according to national regulations

Child-resistant fastening : No
Tactile warning : No

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : GARLIC OIL 206859
CAS No : 8000-78-0 / 8008-99-9
EC no : 232-371-1

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DIALLYL TRISULFIDE	(CAS No) 2050-87-5 (EC no) 218-107-8	25 - 60	Acute Tox. 4 (Oral), H302
DIALLYLDISULPHIDE	(CAS No) 2179-57-9 (EC no) 218-548-6	20 - 35	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Skin Sens. 1, H317
DIALLYL SULPHIDE	(CAS No) 592-88-1 (EC no) 209-775-1	2 - 12	Flam. Liq. 3, H226

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash skin with plenty of water. Get medical advice/attention. Specific treatment (see Read label before use on this label).
First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries after skin contact : Causes skin irritation.
Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.
Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

No additional information available

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

: Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling

: No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools.

Hygiene measures

: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof ventilating equipment.

Storage conditions

: Keep container tightly closed.

Incompatible materials

: Heat sources.

Maximum storage period

: 12 months Shelf life to guarantee the quality and properties of the product; After this period, it is recommended to control organoleptic and physicochemical properties before using the raw material.

Storage temperature

: ~ 18 (5 - 25) °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Skin and body protection

: Wear suitable protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

: Liquid

Colour

: Yellow. orange. red.

Odour

: strong. characteristic.

Odour threshold

: No data available

pH

: No data available

Relative evaporation rate (butylacetate=1)

: No data available

Melting point

: No data available

Freezing point

: No data available

Boiling point

: No data available

Flash point

: No data available

Auto-ignition temperature

: No data available

Decomposition temperature

: No data available

Flammability (solid, gas)

: Flammable liquid and vapour

Vapour pressure

: No data available

Relative vapour density at 20 °C

: No data available

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Relative density	: 1.04 - 1.15
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Refractive index	: 1.55 - 1.585
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

DIALLYL TRISULFIDE (2050-87-5)

LD50 oral rat	500 mg/kg
LD50 oral	100 mg/kg LD50 oral mouse

DIALLYLDISULPHIDE (2179-57-9)

LD50 oral rat	260 mg/kg
LD50 dermal rabbit	3600 mg/kg

DIALLYL SULPHIDE (592-88-1)

LD50 oral rat	2980 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

DIALLYL SULPHIDE (592-88-1)	
Log Pow	2.61

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container to contents/container to agreed companies according to national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport
UN-No. (ADR) : 1992
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable
Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), III, (D/E)

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 (6.1)
Danger labels (ADR) : 3, 6.1



IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

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14.4. Packing group


Packing group (ADR)	: III
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: FT1
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP28
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 36
Orange plates	: 
Tunnel restriction code (ADR)	: D/E

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	DIALLYL TRISULFIDE - DIALLYLDISULPHIDE - DIALLYL SULPHIDE
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3.a. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	GARLIC OIL 206859 - DIALLYL SULPHIDE
3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	GARLIC OIL 206859 - DIALLYL TRISULFIDE - DIALLYLDISULPHIDE
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	GARLIC OIL 206859 - DIALLYLDISULPHIDE - DIALLYL SULPHIDE

GARLIC OIL 206859 is not on the REACH Candidate List

Contains no substance on the REACH candidate list

GARLIC OIL 206859 is not on the REACH Annex XIV List

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 3;ID No. 5821)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
H226	Flammable liquid and vapour
H301	Toxic if swallowed
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product