

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Thymol > 98 % pure

Revision date: 04.07.2023

Product code: 24547

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Thymol > 98 % pure

CAS No: 89-83-8
Index No: 604-032-00-1
EC No: 201-944-8

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

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H302
Skin Corr. 1B; H314
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:



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Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C10H14O
Molecular weight: 150,2 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
89-83-8	thymol			100 %
	201-944-8	604-032-00-1		
	Acute Tox. 4, Skin Corr. 1B, Aquatic Chronic 2; H302 H314 H411			

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		
89-83-8	201-944-8	thymol	100 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 980 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

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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.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Call a physician immediately.

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

Irritant

corrosive

Dyspnoea

Cough

Risk of serious damage to eyes.

Vomiting

Gastric perforation

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

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

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Combustible solids

Hazardous combustion products

In case of fire may be liberated:

Carbon monoxide

Carbon dioxide

5.3. Advice for firefighters

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

Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

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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 containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Avoid dust formation. Do not breathe dust.
- Provide adequate ventilation.

Advice on protection against fire and explosion

Danger of dust explosion.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

Further information on handling

- Take off immediately all contaminated clothing and wash it before reuse.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Store in a well-ventilated place. Keep container tightly closed.
- Keep container dry.

Further information on storage conditions

- Keep cool. Protect from sunlight.
- storage temperature: +15°C - +25°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
89-83-8	thymol		
Worker DNEL, long-term	inhalation	systemic	117 mg/m ³
Worker DNEL, acute	inhalation	systemic	117 mg/m ³
Worker DNEL, long-term	inhalation	local	1 mg/m ³
Worker DNEL, acute	inhalation	local	1 mg/m ³
Worker DNEL, long-term	dermal	systemic	16,6 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	16,6 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	8,3 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	8,3 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	8,3 mg/kg bw/day
Consumer DNEL, acute	inhalation	local	0,5 mg/m ³
Consumer DNEL, long-term	dermal	systemic	8,3 mg/kg bw/day
Consumer DNEL, acute	inhalation	systemic	29 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	29 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,5 mg/m ³

PNEC values

CAS No	Substance	
Environmental compartment	Value	
89-83-8	thymol	
Freshwater	0,038 mg/l	
Freshwater (intermittent releases)	0,032 mg/l	
Marine water	0,004 mg/l	
Freshwater sediment	3,16 mg/kg	
Marine sediment	0,316 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0,396 mg/l	
Soil	0,606 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles
Face protection umbrella

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Recommended glove articles: KCL 741 Dermatrill® L

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Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Recommended glove articles: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet <(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Protective clothing, acid-resistant
Take off immediately all contaminated clothing and wash it before reuse.
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

Respiratory protection

Respiratory protection necessary at: dust formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	colourless
Odour:	characteristic

Test method

Melting point/freezing point:	49-51 °C
Boiling point or initial boiling point and boiling range:	232,5 °C
Flammability:	No data available
Lower explosion limits:	1,4 vol. %
Upper explosion limits:	7,7 vol. %
Flash point:	102 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value (at 20 °C):	5-7 (0,8 g/l)
Viscosity / kinematic: (at 50 °C)	4,3 mm ² /s
Water solubility: (at 25 °C)	0,98 g/L
Solubility in other solvents	No data available
Partition coefficient n-octanol/water:	log KOW = 3,3
Vapour pressure: (at 20 °C)	1,332 hPa
Vapour pressure: (at 50 °C)	2,5 hPa
Density (at 20 °C):	0,97 g/cm ³
Bulk density:	No data available

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Relative vapour density: No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Danger of dust explosion.

Sustaining combustion:

No data available

Self-ignition temperature

285 °C

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

No data available

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

Viscosity / dynamic:

(at 20 °C)

No data available

Flow time:

No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Danger of dust explosion.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Violent reaction with:

Oxidising agent, strong

Strong alkali

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

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Acute toxicity

Harmful if swallowed.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
89-83-8	thymol				
	oral	LD50 980 mg/kg	Rat	Fd. Cosmet. Toxicol. 2, 327-343 (1964)	Groups of 10 young adult Osborne-Mendel
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1986)	other: Directive 84/449/EWG

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

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.

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Other information

Irritant

corrosive

Dyspnoea

Cough

Risk of serious damage to eyes.

Vomiting

Gastric perforation

Further information

Liver and kidney damage

SECTION 12: Ecological information

12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
89-83-8	thymol					
	Acute fish toxicity	LC50 3,2 mg/l	96 h	Pimephales promelas	REACH Registration Dossier	other: Refer below
	Acute algae toxicity	ErC50 14 mg/l	72 h	Green algae	REACH Registration Dossier	other: as mention below
	Acute crustacea toxicity	EC50 4,5 mg/l	48 h	Daphnia magna	Review article or handbook (2004)	OECD Guideline 202
	Crustacea toxicity	NOEC 2 mg/l	21 d	Other aquatic invertebrates	REACH Registration Dossier	other: as mention below
	Acute bacteria toxicity	(EC50 mg/l) 39,6	3 h	activated sludge of a predominantly industrial sew	Study report (1986)	OECD Guideline 209

12.2. Persistence and degradability

>80% 28d (MSDS)
Readily biodegradable (according to OECD criteria).

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
89-83-8	thymol	3,3

BCF

CAS No	Chemical name	BCF	Species	Source
89-83-8	thymol	> 7,8 - < 19	Cyprinus carpio	REACH Registration D

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Do not allow to enter into surface water or drains.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not mix with other wastes.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2430
14.2. UN proper shipping name:	ALKYLPHENOLS, SOLID, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C4
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2430
14.2. UN proper shipping name:	ALKYLPHENOLS, SOLID, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C4
Limited quantity:	5 kg
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2430
14.2. UN proper shipping name:	ALKYLPHENOLS, SOLID, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	223
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2430
14.2. UN proper shipping name:	ALKYLPHENOLS, SOLID, N.O.S.
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	5 kg
Passenger LQ:	Y845
Excepted quantity:	E1
IATA-packing instructions - Passenger:	860
IATA-max. quantity - Passenger:	25 kg
IATA-packing instructions - Cargo:	864
IATA-max. quantity - Cargo:	100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	thymol

SECTION 15: Regulatory information

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

EU regulatory information

Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

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.

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 12.

Abbreviations and acronyms

Acute Tox: Acute toxicity

Skin Corr: Skin corrosion

Eye Dam: Eye damage

Aquatic Chronic: Chronic aquatic hazard

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. 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.