

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 26.05.2017

Version 4.8

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

1.1 Product identifier

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

REACH Registration Number 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.

CAS-No. 119-47-1

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

Identified uses Chemical for synthesis
For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Reproductive toxicity, Category 2, H361f

Chronic aquatic toxicity, Category 4, H413

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

H361f Suspected of damaging fertility.

H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements

Prevention

P273 Avoid release to the environment.

Response

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Warning

Hazard statements

H361f Suspected of damaging fertility.

H413 May cause long lasting harmful effects to aquatic life.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	818447
Product name	2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Precautionary statements

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Contains: 2,2'-methylenebis(4-methyl-6-tert.-butylphenol)

CAS-No. 119-47-1

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula	(2-(OH)-3-(CH ₃) ₃ C-5-(CH ₃)C ₆ H ₂) ₂ CH ₂	C ₂₃ H ₃₂ O ₂ (Hill)
EC-No.	204-327-1	
Molar mass	340,5 g/mol	

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
2,2'-methylenebis(4-methyl-6-tert.-butylphenol) (<= 100 %)		
119-47-1	*)	

Reproductive toxicity, Category 2, H361f

Chronic aquatic toxicity, Category 4, H413

*) 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.

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, gastric pain, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air on intense heating.

5.3 Advice for firefighters

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Break through time: > 480 min
splash contact:

Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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).

Other protective equipment

protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form crystalline

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Colour	white
Odour	slight
Odour Threshold	Not applicable
pH	4 - 7 at 20 °C (aqueous suspension)
Melting point/range	125 - 132 °C
Boiling point	No information available.
Flash point	185 °C Method: ISO 2719
Evaporation rate	No information available.
Flammability (solid, gas)	May form combustible dust concentrations in air.
Lower explosion limit	10.000 mg/m ³ Medium: Dust
Upper explosion limit	No information available.
Vapour pressure	< 1 hPa
Relative vapour density	No information available.
Density	1,07 g/cm ³ at 20 °C
Relative density	No information available.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	818447
Product name	2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Water solubility	0,007 mg/l at 20 °C Method: OECD Test Guideline 105
------------------	---

Partition coefficient: n-octanol/water	log Pow: 6,25 (20 °C) OECD Test Guideline 107 Potential bioaccumulation
--	---

Auto-ignition temperature	> 170 °C Method: Relative self-ignition temperature for solids
---------------------------	---

Decomposition temperature	> 200 °C
---------------------------	----------

Viscosity, dynamic	No information available.
--------------------	---------------------------

Explosive properties	Not classified as explosive.
----------------------	------------------------------

Oxidizing properties	none
----------------------	------

9.2 Other data

Ignition temperature	350 °C
----------------------	--------

Bulk density	ca.300 kg/m ³
--------------	--------------------------

SECTION 10. Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents, bases, acids

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: > 5.000 mg/kg

(ECHA)

Symptoms: Nausea, Vomiting, Gastrointestinal discomfort

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

LD50 Rabbit: > 10.000 mg/kg

(ECHA)

Skin irritation

Rabbit

Result: No skin irritation

OECD Test Guideline 404

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Eye irritation

Rabbit

Result: No eye irritation

OECD Test Guideline 405

Sensitisation

Sensitisation test: Mouse

Result: Does not cause skin sensitisation.

Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro

In vitro mammalian cell gene mutation test

Result: negative

Method: OECD Test Guideline 476

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

Method: OECD Test Guideline 473

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

CMR effects

Reproductive toxicity:

Suspected of damaging fertility.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Reproductive toxicity:

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Repeated dose toxicity

Rat

male

Oral

daily

NOAEL: 12,5 mg/kg

LOAEL: 50 mg/kg

OECD Test Guideline 421

Target Organs: male reproductive organs

Subacute toxicity

Aspiration hazard

This information is not available.

11.2 Further information

After uptake of large quantities:

Systemic effects:

Nausea, Vomiting, gastric pain

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

semi-static test LC50 *Oryzias latipes* (Orange-red killifish): > 5 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203

(above the solubility limit in the test medium)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Toxicity to daphnia and other aquatic invertebrates

static test EC50 Daphnia magna (Water flea): > 4,8 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

(above the solubility limit in the test medium)

Toxicity to algae

static test ErC50 Pseudokirchneriella subcapitata (green algae): > 5 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

(above the solubility limit in the test medium)

static test NOEC Pseudokirchneriella subcapitata (green algae): 1,3 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

(above the solubility limit in the test medium)

Toxicity to bacteria

static test EC50 activated sludge: > 10.000 mg/l; 3 h

OECD Test Guideline 209

(above the solubility limit in the test medium)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

semi-static test NOEC Daphnia magna (Water flea): 0,34 mg/l; 21 d

Analytical monitoring: yes

OECD Test Guideline 211

(above the solubility limit in the test medium)

12.2 Persistence and degradability

Biodegradability

0 %; 28 d; aerobic

OECD Test Guideline 301C

Not readily biodegradable.

12.3 Bioaccumulative potential

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Partition coefficient: n-octanol/water

log Pow: 6,25 (20 °C)

OECD Test Guideline 107

Potential bioaccumulation

Bioaccumulation

Bioconcentration factor (BCF): 400 - 840

Cyprinus carpio (Carp) 2 µg/l; 60 d

Temperature: 25 °C

OECD Test Guideline 305

Bioconcentration factor (BCF): 320 - 780

Cyprinus carpio (Carp) 0,2 µg/l; 60 d

Temperature: 25 °C

OECD Test Guideline 305

The product may be accumulated in organisms.

12.4 Mobility in soil

No information 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

Additional ecological information

Discharge into the environment must be avoided.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

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

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III

Legislation Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) 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 $\geq 0.1\%$ (w/w).

National legislation

Storage class 10 - 13

Dust explosion class St2

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H361f Suspected of damaging fertility.

H413 May cause long lasting harmful effects to aquatic life.

Training advice

Provide adequate information, instruction and training for operators.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 818447

Product name 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) for synthesis

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.