



Safety Data Sheet

Stearic acid

Section 1: Chemical Product and Company Identification

Product Name: stearic acid

Catalog Codes: 467

CAS#: 57-11-4

RTECS: -

TSCA: -

Synonym: -

Chemical Name: stearic acid

Chemical Formula: C₁₈H₃₆O₂

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
stearic acid	57-11-4	-

Toxicological Data on Ingredients:

Section 3: Hazards Identification

3.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to regulation (EC) No 1272/2008

3.2 Label elements

Not a hazard pictogram, no signal word, no hazard statement (s), no precautionary statement(s) required

3.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 4: First Aid Measures

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air

In case of skin contact

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

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire and Explosion Data

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

Carbon oxides

Combustible.

Vapors 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

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

None.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

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

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up dry dispose of properly. Clean up affected. Avoid generation of dust.

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Advice on safe handling

For precautions see section 3.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. dry.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 11: combustible solids

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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

full contact

Material: nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

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Splash contact

Material: nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

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.

Control of environmental exposure

No special precautionary measures necessary.

Section 9: Physical and Chemical Properties

Physical state	solid
Color	white
Odor	mild
pH	No data available
Melting point/freezing point	Melting point: 69.4°C
Initial boiling point and boiling range	383-385,8 °C at 1.013 hPa –(ECHA)
Flash point	Ca 200 °C – cleveland open cup – ASTM D 92
Decomposition temperature	No data available
Flammability (solid, gas)	No data available

Upper/lower flammability or explosive limits	No data available
Vapor pressure	No data available
Density	0,845 g/cm ³ at 20 °C
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	Ca 400 °C
Decomposition Temperature	No data available
Viscosity	Viscosity, kinematic: 12 mm ² /s at 70 °C- ASTM D 445 Viscosity, dynamic: 9.87 mPa.s at 20 °C
Relative vapor density	No data available
Explosive properties	No data available
Oxidizing properties	None
Other safety information	
Surface tension	Ca 0.03 mN/m at 20 °C
Bulk density	Ca 400-500 kg/m ³

Section 10: Stability and Reactivity Data

10.1 Reactivity

Risk of dust explosion.

Forms explosive mixtures with air on intense heating.

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

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).

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents.

Reducing agents

Strong alkalis

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Mixture

Acute toxicity

LD50 Oral - Rat - > 5.000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg

(OECD Test Guideline 434)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(Patch Test 24 Hrs.)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471
Result: negative
Remarks: (National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 1.000 mg/kg Remarks: The value is given in analogy to the following substances: Docosanoic acid

Cough, Gastrointestinal discomfort, irritant effects To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

12.1 Toxicity

Toxicity to algae

static test ErC50 - Pseudokirchneriella subcapitata -
> 0,9 mg/l - 72 h (OECD Test Guideline 201)
Remarks: The value is given in analogy to the
following substances:

palmitic acid
(stearic acid)

Toxicity to daphnia

semi-static test EC50 - Daphnia magna (Water flea)

and other aquatic invertebrates (Chronic toxicity)

- > 0,22 mg/l - 21 d (OECD Test Guideline 211)
Remarks: The value is given in analogy to the following substances: palmitic acid

12.2 Persistence and degradability

Biodegradability

aerobic - Exposure time 21 d
Result: 95% - Readily biodegradable.
Remarks: (ECHA)

Ratio BOD/ThBOD demand

44 %
Remarks: (HSDB)

12.3 Bioaccumulative potential

Bioaccumulation

Danio rerio (zebra fish) - 28 d at 21,5 °C - 6,4 mg/l (stearic acid)
Bioconcentration factor (BCF): 238 - 288 (OECD Test Guideline 305)
Remarks: The value is given in analogy to the following substances: Sodium laurate

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Section 13: Disposal Considerations

13.1 Waste treatment methods

No data available

Section 14: Transport Information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

Further information

Not classified as dangerous in the meaning of transport regulations.

Section 15: Other Regulatory Information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

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

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

Created: /08/2025

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