SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.14
Revision Date 12.02.2025
Print Date 30.03.2025
GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

1.1 Product identifiers

Product name : LSMLS Plate 7 (Lipophilic)

Product Number : LSMLS07
Brand : Sigma
REACH No. :

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

Identified uses : Laboratory chemicals, Manufacture of substances
Uses advised against : For R&D use only. Not for pharmaceutical, household or other uses.

1.3 Details of the supplier of the safety data sheet

Company :

1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))
+(353)-19014670 (CHEMTREC Ireland)
001-803-017-9114 (CHEMTREC India)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, (Category 4)	H332: Harmful if inhaled.
Skin irritation, (Category 2)	H315: Causes skin irritation.
Serious eye damage, (Category 1)	H318: Causes serious eye damage.
Skin sensitization, (Category 1)	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, (Category 2)	H341: Suspected of causing genetic defects.
Carcinogenicity, (Category 1B)	H350: May cause cancer.
Reproductive toxicity, (Category 1A)	H360FD: May damage fertility. May damage the unborn child.

Effects on or via lactation	H362: May cause harm to breast-fed children.
Specific target organ toxicity - repeated exposure, (Category 2), Thyroid, Cardio-vascular system, Kidney	H373: May cause damage to organs through prolonged or repeated exposure.
Specific target organ toxicity - repeated exposure, (Category 2)	H373: May cause damage to organs through prolonged or repeated exposure if swallowed.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word	Danger
Hazard Statements	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H373	May cause damage to organs (Thyroid, Cardio-vascular system, Kidney) through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P263	Avoid contact during pregnancy and while nursing.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none
	Restricted to professional users.

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard Statements	
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H362	May cause harm to breast-fed children.
H318	Causes serious eye damage.
H360FD	May damage fertility. May damage the unborn child.
Precautionary Statements	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

2.3 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:
This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.
Toxicological information:
This substance/mixture contains components considered to have endocrine disrupting properties affecting human health, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.
Caution: Physiologically highly active, therapeutically usable substance. The substance must be handled with the care required for hazardous materials.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component		Classification	Concentration
2-Propenoic acid, 3-(4-hydroxyphenyl)-, (E)-			
CAS-No. EC-No.	501-98-4 610-511-6 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
retinol			
CAS-No.	68-26-8	Eye Irrit. 2; Skin Sens. 1;	>= 1 - < 2.5

EC-No.	200-683-7 *	Repr. 1B; Aquatic Chronic 4; H319, H317, H360FD, H413	%
all-trans-squalene			
CAS-No. EC-No.	111-02-4 203-826-1 *	Asp. Tox. 1; H304	>= 1 - < 10 %
Ursodeoxycholic acid			
CAS-No. EC-No.	128-13-2 204-879-3 *	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %
ergocalciferol; Vitamin D2			
CAS-No. EC-No. Index-No.	50-14-6 200-014-9 603-179-00-9 *	Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; STOT RE 1; H301, H330, H311, H372	>= 1 - < 10 %
heptanoic acid; oenanthic acid			
CAS-No. EC-No. Index-No.	111-14-8 203-838-7 607-196-00-2 *	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H332, H314, H318, H335	>= 1 - < 3 %
nonanoic acid			
CAS-No. EC-No. Index-No. Registration number	112-05-0 203-931-2 607-197-00-8 01-2119529247-37-XXXX	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %
Octanoic acid			
CAS-No. EC-No. Index-No. Registration number	124-07-2 204-677-5 607-708-00-4 01-2119552491-41-XXXX	Skin Corr. 1C; Eye Dam. 1; Aquatic Chronic 3; H314, H318, H412	>= 1 - < 2.5 %
(Z)-Hexadec-9-enoic acid			
CAS-No. EC-No.	373-49-9 206-765-9 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 4; H315, H319, H335, H413	>= 1 - < 2.5 %
Chenodeoxycholic acid			
CAS-No. EC-No.	474-25-9 207-481-8 *	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %

3,3'-(3,7,12,17-Tetramethyl-8,13-divinylporphine-2,18-diyl)di(propionic acid)			
CAS-No. EC-No.	553-12-8 209-033-7 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
α-estradiol			
CAS-No. EC-No.	57-91-0 200-354-8 *	Muta. 2; Carc. 2; Repr. 1A; Lact. ; Aquatic Chronic 1; H341, H351, H360F, H362, H410	>= 1 - < 2.5 %
1-Hydroxy-2-naphthoesäure			
CAS-No. EC-No.	86-48-6 201-674-0 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
D-(+)-erythro-4-trans-Sphingenine			
CAS-No. EC-No.	123-78-4 204-651-3 *	Aquatic Chronic 4; H413	>= 1 - < 2.5 %
quinoline			
CAS-No. EC-No. Index-No.	91-22-5 202-051-6 613-281-00-5 *	Acute Tox. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Muta. 2; Carc. 1B; Aquatic Chronic 2; H301, H312, H315, H319, H341, H350, H411	>= 1 - < 2.5 %
Vitamin A palmitate			
CAS-No. EC-No.	79-81-2 201-228-5 *	Repr. 1B; Aquatic Chronic 3; H360D, H412	>= 1 - < 2.5 %
cortisone			
CAS-No. EC-No.	53-06-5 200-162-4 *	Repr. 2; H361d	>= 1 - < 3 %
L-thyroxine			
CAS-No. EC-No.	51-48-9 200-101-1 *	STOT RE 1; H372	>= 1 - < 10 %
Icosanoic acid			
CAS-No. EC-No.	506-30-9 208-031-3 *	Skin Irrit. 2; Eye Irrit. 2; H315, H319	>= 1 - < 10 %

Gamma-linolenic acid			
CAS-No.	506-26-3 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
Decanoic acid			
CAS-No. EC-No. Index-No. Registration number	334-48-5 206-376-4 607-709-00-X 01-2120139722-58-XXXX	Skin Irrit. 2; Eye Irrit. 2; Aquatic Chronic 3; H315, H319, H412	>= 1 - < 2.5 %
Tricosanoic acid			
CAS-No. EC-No.	2433-96-7 219-419-7 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
trans-cinnamic acid			
CAS-No. EC-No. Registration number	140-10-3 205-398-1 01-2120765001-68-XXXX	Eye Irrit. 2; H319	>= 1 - < 10 %
indole			
CAS-No. EC-No.	120-72-9 204-420-7 *	Acute Tox. 4; Acute Tox. 3; Eye Irrit. 2; Aquatic Acute 1; H302, H311, H319, H400 M-Factor - Aquatic Acute: 1	>= 1 - < 2.5 %
cis-13-erucic acid			
CAS-No. EC-No.	112-86-7 204-011-3 *	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335	>= 1 - < 10 %
2-undecanone, n-			
CAS-No. EC-No.	112-12-9 203-937-5 *	Aquatic Acute 1; Aquatic Chronic 1; H400, H410 M-Factor - Aquatic Acute: 1	>= 1 - < 2.5 %
4-methyl-2-oxovaleric acid			
CAS-No. EC-No.	816-66-0 212-435-5 *	Skin Corr. 1B; Eye Dam. 1; H314, H318	>= 1 - < 3 %
lauric acid			
CAS-No. EC-No. Registration	143-07-7 205-582-1	Eye Dam. 1; H318	>= 1 - < 3 %

number	01-2119538184-40-XXXX		
sodium deoxycholate			
CAS-No. EC-No. Registration number	302-95-4 206-132-7 01-2120768604-47-XXXX	Acute Tox. 4; H302	>= 1 - < 10 %
Vitamin A acid			
CAS-No. EC-No.	302-79-4 206-129-0 *	Acute Tox. 4; Skin Irrit. 2; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H315, H360FD, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 1 - < 2.5 %
Bis(2-ethylhexyl) phthalate Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No. Index-No. Registration number	117-81-7 204-211-0 607-317-00-9 01-2119484611-38-XXXX	Repr. 1B; H360FD	>= 1 - < 10 %

*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, or the annual tonnage does not require a registration.

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

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Consult a physician. Show this material safety data sheet to the doctor in attendance.Show this material safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.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
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in 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.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
Nitrogen oxides (NOx)
Sulfur oxides
Oxides of phosphorus
Hydrogen iodide
Sodium oxides
Mixture with combustible ingredients.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Use water spray to cool unopened containers.Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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

Avoid exposure - obtain special instructions before use.Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.
Storage stability Recommended storage temperature
-20 °C
Storage class
Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

required

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
protective clothing

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
required when vapours/aerosols 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 ABEK

The entrepeneur 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
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	No data available
c)	Odor	No data available
d)	Melting point/freezing point	No data available
e)	Initial boiling point and boiling range	No data available
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	No data available
i)	Autoignition temperature	No data available
j)	Decomposition temperature	No data available
k)	pH	No data available
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	No data available
n)	Partition coefficient: n-octanol/water	No data available
o)	Vapor pressure	No data available
p)	Density	No data available
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	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

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

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with:
Strong oxidizing agents

10.4 Conditions to avoid

Heat, flames and sparks.
no information available

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
Acute toxicity estimate Oral - > 2,000 mg/kg
(Calculation method)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Acute toxicity estimate Inhalation - 4 h - 3.7 mg/l - dust/mist(Calculation method)

Symptoms: Possible symptoms:, mucosal irritations
Acute toxicity estimate Dermal - > 2,000 mg/kg
(Calculation method)

Skin corrosion/irritation
Remarks: Mixture causes skin irritation.

Serious eye damage/eye irritation
Remarks: Mixture causes serious eye damage.

Respiratory or skin sensitization
Mixture may cause an allergic skin reaction.

Germ cell mutagenicity
Evidence of genetic defects.

Carcinogenicity

Possible carcinogen.

Reproductive toxicity
May harm the unborn child. Positive evidence from human epidemiological studies.
May impair fertility. Positive evidence from human epidemiological studies.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Mixture may cause damage to organs through prolonged or repeated exposure.
- Thyroid, Cardio-vascular system, Kidney
Mixture may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	This substance/mixture contains components considered to have endocrine disrupting properties affecting human health, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Components:

Bis(2-ethylhexyl) phthalate:

Assessment	The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for human health.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components

2-Propenoic acid, 3-(4-hydroxyphenyl)-, (E)-

Acute toxicity
LD50 Oral - Mouse - 2,850 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity).
Respiratory disorder
(RTECS)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin irritation.

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

retinol

Acute toxicity
LD50 Oral - Rat - male and female - 9,560 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: negative - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irritation to eyes, reversing within 7 days - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Buehler Test - Guinea pig
Result: positive
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
May damage the unborn child.
May damage fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

all-trans-squalene

Acute toxicity
LD50 Oral - Mouse - 50,000 mg/kg
(OECD Test Guideline 401)
LD50 Inhalation - Rat - 4 h - 13,800 mg/l - vapor
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(Draize Test)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(Draize Test)

Respiratory or skin sensitization
Maximization Test
Result: Not sensitising
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Remarks: (National Toxicology Program)
Test Type: Chromosome aberration test in vitro
Test system: lymphocyte
Result: negative
Test Type: sister chromatid exchange assay
Test system: lymphocyte
Result: negative

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
Aspiration may cause pulmonary edema and pneumonitis.

Ursodeoxycholic acid

Acute toxicity
LD50 Oral - Rat - 4,600 mg/kg
Remarks: (RTECS)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin irritation.
(ECHA)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.
(ECHA)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Remarks: (ECHA)
Species: Hamster
Result: negative
Remarks: (ECHA)

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

ergocalciferol; Vitamin D2

Acute toxicity
LD50 Oral - Rat - 10 mg/kg
Remarks: (RTECS)
(Regulation (EC) No 1272/2008, Annex VI)
LC50 Inhalation - 4 h - 0.051 mg/l - dust/mist
LD50 Dermal - 300 mg/kg

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Ingestion - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

heptanoic acid; oenanthic acid

Acute toxicity
LD50 Oral - Rat - 7,000 mg/kg
Remarks: (RTECS)
LC50 Inhalation - Rat - male and female - 4 h - > 4.6 mg/l - dust/mist
(OECD Test Guideline 403)
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
LC50 Inhalation - 4 h - 11 mg/l - vapor
Acute toxicity estimate Inhalation - 4.61 mg/l - dust/mist
(ATE value derived from LD50/LC50 value)
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Causes burns.
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Remarks: Causes serious eye damage.

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation. - Respiratory Tract
Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

nonanoic acid

Acute toxicity
LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 423)
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: Irritations - 4 h
(OECD Test Guideline 404)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Human lymphocytes
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

Octanoic acid

Acute toxicity
LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

LD50 Dermal - Rabbit - > 5,000 mg/kg
Remarks: (RTECS)

Skin corrosion/irritation
Skin - Rabbit
Result: Corrosive after 1 to 4 hours of exposure - 4 h
(OECD Test Guideline 404)
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation
Remarks: Causes serious eye damage.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Result: negative
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: Positive results were obtained in some in vitro tests.

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

(Z)-Hexadec-9-enoic acid

Acute toxicity
Oral: No data available
Inhalation: Irritating to respiratory system.
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin irritation.

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Chenodeoxycholic acid

Acute toxicity
LD50 Oral - Rat - 4,000 mg/kg
Remarks: Behavioral:Change in motor activity (specific assay).
Lungs, Thorax, or Respiration:Dyspnea.
Diarrhea
(RTECS)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin irritation.
(ECHA)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.
(ECHA)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Carcinogenicity
No data available

Reproductive toxicity
Possible risk of congenital malformation in the fetus.
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

3,3'-(3,7,12,17-Tetramethyl-8,13-divinylporphine-2,18-diyl)di(propionic acid)

Acute toxicity
Oral: No data available
Inhalation: Irritating to respiratory system.
Dermal: No data available

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

α-estradiol

Acute toxicity
Oral: No data available
Inhalation: No data available
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
Suspected of causing genetic defects.

Carcinogenicity
Suspected of causing cancer.

Reproductive toxicity
Studies indicating a hazard to babies during the lactation period May damage fertility. Positive evidence from human epidemiological studies.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

1-Hydroxy-2-naphthoesäure

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

D-(+)-erythro-4-trans-Sphingenine

Acute toxicity
Oral: No data available
Inhalation: No data available
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
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

quinoline

Acute toxicity
LD50 Oral - Rat - male and female - 262 mg/kg
(OECD Test Guideline 401)
Symptoms: Nausea, Vomiting, Gastrointestinal disturbance
Symptoms: Possible damages:, mucosal irritations
LD50 Dermal - Rat - male and female - 1,377 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: irritating - 24 h
(Draize Test)
Remarks: (ECHA)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Severe irritations - 24 h
Remarks: (ECHA)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity
Suspected of causing genetic defects.
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: Positive results were obtained in some in vitro tests.
Remarks: (ECHA)
Test Type: Ames test
Test system: Salmonella typhimurium
Result: Positive results were obtained in some in vitro tests.
Remarks: (ECHA)
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: Positive results were obtained in some in vitro tests.
Remarks: (ECHA)
Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: positive
Remarks: (ECHA)
Species: Mouse - male - Bone marrow

Result: positive
Remarks: (ECHA)

Carcinogenicity
Presumed to have carcinogenic potential for humans

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - Nausea, Vomiting, Gastrointestinal disturbance
Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Vitamin A palmitate

Acute toxicity
LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 72 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: Does not cause skin sensitization.
(OECD Test Guideline 406)

Germ cell mutagenicity
No data available
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
May damage the unborn child.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

cortisone

Acute toxicity
Oral: No data available
Inhalation: No data available
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
No data available

Reproductive toxicity
Suspected of damaging the unborn child.
Suspected of damaging fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

L-thyroxine

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Skin - EPISKIN Human Skin Model Test
Result: No skin irritation - 15 min
(OECD Test Guideline 439)

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Causes damage to organs through prolonged or repeated exposure.
- Thyroid, Cardio-vascular system, Kidney

Aspiration hazard
No data available

Icosanoic acid

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin irritation.

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

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

Gamma-linolenic acid

Acute toxicity
Oral: No data available
Inhalation: Irritating to respiratory system.
Dermal: No data available

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Decanoic acid

Acute toxicity
LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: Irritating to skin. - 24 h
(Draize Test)
Remarks: (RTECS)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Eye irritation
(OECD Test Guideline 405)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization
Buehler Test - Guinea pig

Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

Tricosanoic acid

Acute toxicity
Oral: No data available
Inhalation: Irritating to respiratory system.
Dermal: No data available

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

trans-cinnamic acid

Acute toxicity
LD50 Oral - Rat - 2,500 mg/kg
Remarks: (RTECS)
The value is given in analogy to the following substances: Cinnamic acid
Inhalation: No data available
LD50 Dermal - Rabbit - > 5,000 mg/kg
Remarks: (External MSDS)

Skin corrosion/irritation
Skin - in vitro test
Result: No skin irritation - 3 - 60 min
(OECD Test Guideline 431)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.
(ECHA)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative

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

indole

Acute toxicity
LD50 Oral - Rat - 1,000 mg/kg
Remarks: (RTECS)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Acute toxicity estimate Oral - 1,000 mg/kg
(ATE value derived from LD50/LC50 value)
Inhalation: Irritating to respiratory system.
LD50 Dermal - Rabbit - 790 mg/kg
Remarks: (RTECS)

Acute toxicity estimate Dermal - 790 mg/kg
(ATE value derived from LD50/LC50 value)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
Remarks: (ECHA)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye irritation. - 24 h
Remarks: (ECHA)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Remarks: (Lit.)
Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

cis-13-erucic acid

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

2-undecanone, n-

Acute toxicity
LD50 Oral - Rat - 5,000 mg/kg
LD50 Oral - Mouse - 3,880 mg/kg
Inhalation: No data available
LD50 Dermal - Rabbit - > 5,000 mg/kg

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

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

4-methyl-2-oxovaleric acid

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Remarks: Causes skin burns.

Serious eye damage/eye irritation
Remarks: Causes serious eye damage.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

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

lauric acid

Acute toxicity
LD50 Oral - Rat - male and female - > 5,000 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 0.162 mg/l - vapor
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
(OECD Test Guideline 434)
Remarks: The value is given in analogy to the following substances: stearic acid

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye damage.
(OECD Test Guideline 405)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Result: negative
Remarks: The value is given in analogy to the following substances: Docosanoic acid
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Remarks: The value is given in analogy to the following substances: Decanoic acid

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

sodium deoxycholate

Acute toxicity
LD50 Oral - Rat - 1,370 mg/kg
Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Ataxia. Lungs, Thorax, or Respiration:Other changes.
(RTECS)
Acute toxicity estimate Oral - 1,370 mg/kg
(Calculation method)
Inhalation: No data available
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
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

Vitamin A acid

Acute toxicity
LD50 Oral - Rat - 2,000 mg/kg
Remarks: (Lit.)
Inhalation: No data available
LD50 Dermal - Rabbit - > 2,500 mg/kg
Remarks: (External MSDS)

Skin corrosion/irritation
Remarks: Causes skin irritation.

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

No data available

Reproductive toxicity
May damage the unborn child.
May damage fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Bis(2-ethylhexyl) phthalate

Acute toxicity
LD50 Oral - Rat - 30,000 mg/kg
Remarks: (RTECS)
LC0 Inhalation - Rat - male and female - 4 h - > 10.62 mg/l - vapor
(OECD Test Guideline 403)
Remarks: (highest concentration to be prepared)
LD50 Dermal - Rabbit - 19,800 mg/kg
Remarks: (ECHA)

Skin corrosion/irritation
Skin - Rabbit
Result: slight irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 72 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test - Guinea pig

Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: negative
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative
Test Type: Micronucleus test
Test system: Chinese hamster lung cells
Result: negative
Remarks: (ECHA)
Method: OECD Test Guideline 475
Species: Rat - male - Bone marrow
Result: negative
Method: OECD Test Guideline 486
Species: Rat - male and female - Liver cells
Result: negative

Carcinogenicity
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity
May damage the unborn child.
May damage fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture
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

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	:	This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Components:

Bis(2-ethylhexyl) phthalate:

Assessment	:	The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

12.7 Other adverse effects

Very toxic to aquatic life with long lasting effects.

Components

2-Propenoic acid, 3-(4-hydroxyphenyl)-, (E)-

No data available

retinol

Toxicity to fish	static test LC50 - Danio rerio (zebra fish) - 316.23 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 152.94 mg/l - 72 h (DIN 38412)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

all-trans-squalene

No data available

Ursodeoxycholic acid

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test NOEC - Daphnia magna (Water flea) - 75.52 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h (OECD Test Guideline 201)

	static test NOEC - Pseudokirchneriella subcapitata - 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

ergocalciferol; Vitamin D2
No data available

heptanoic acid; oenanthic acid

Toxicity to fish	semi-static test LC50 - Oryzias latipes - 74.8 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 72 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth inhibition EC50 - Selenastrum capricornutum (green algae) - 61.2 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	NOEC - Daphnia magna (Water flea) - 40 mg/l - 21 d (OECD Test Guideline 211)

nonanoic acid

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 91 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 96 mg/l - 48 h (US-EPA)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 25 mg/l - 72 h (OECD Test Guideline 201)
	static test NOEC - Pseudokirchneriella subcapitata (green algae) - 5.66 mg/l - 72 h (OECD Test Guideline 201)

Octanoic acid

Toxicity to fish	static test LC50 - Lepomis macrochirus (Bluegill sunfish) - 22 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 21 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 43.73 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC10 - Pseudomonas putida - 912 mg/l - 18 h

(ISO 10712)

Toxicity to fish(Chronic toxicity)	flow-through test LC50 - Danio rerio (zebra fish) - 9.8 mg/l - 28 d Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test LC50 - Daphnia magna (Water flea) - 20 mg/l - 21 d (OECD Test Guideline 211)

(Z)-Hexadec-9-enoic acid

No data available

Chenodeoxycholic acid

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203) Remarks: (in analogy to similar products)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products)
Toxicity to bacteria	Remarks: (in analogy to similar products)

3,3'-(3,7,12,17-Tetramethyl-8,13-divinylporphine-2,18-diyl)di(propionic acid)
No data available

α-estradiol

No data available

1-Hydroxy-2-naphthoesäure
No data available

D-(+)-erythro-4-trans-Sphingenine

No data available

quinoline

Toxicity to fish	semi-static test LC50 - Poecilia reticulata (guppy) - 29.9 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to bacteria	
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 0.8 mg/l - 21 d Remarks: (ECHA)

Vitamin A palmitate

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 96 h (DIN 38412)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 35.34 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 152.94 mg/l - 72 h Remarks: (ECHA)

cortisone

No data available

L-thyroxine

Toxicity to daphnia and other aquatic invertebrates	static test - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Raphidocelis subcapitata (freshwater green alga) - > 1.04 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Raphidocelis subcapitata (freshwater green alga) - 1.04 mg/l - 72 h (OECD Test Guideline 201)

Icosanoic acid

No toxicity at the limit of solubility.

Toxicity to bacteria	Remarks: (ECHA)

Gamma-linolenic acid

No data available

Decanoic acid

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 20 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 15 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Pseudokirchneriella subcapitata (green algae) - 3.2 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Danio rerio (zebra fish) - 2 mg/l - 28 d Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 0.2 mg/l - 21 d (OECD Test Guideline 211)

Tricosanoic acid
No data available

trans-cinnamic acid

Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 32 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 19 mg/l - 72 h (OECD Test Guideline 201)

indole

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1 mg/l - 48 h Remarks: (Lit.)
Toxicity to algae	static test EC50 - Scenedesmus acuminatus - 9.42 mg/l - 96 h Remarks: (ECHA)
Toxicity to bacteria	microtox test EC50 - Photobacterium phosphoreum - 2.4 mg/l - 30 min Remarks: (Lit.)

cis-13-erucic acid

No data available

2-undecanone, n-

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 2.5 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.54 mg/l - 48 h

4-methyl-2-oxovaleric acid

No data available

lauric acid

Toxicity to fish	semi-static test LC50 - Oryzias latipes (Orange-red killifish) - 5 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 3.6 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 7.6 mg/l - 72 h (OECD Test Guideline 201) Remarks: (above the solubility limit in the test medium)
Toxicity to bacteria	static test EC10 - Pseudomonas putida - > 1,000 mg/l - 30 min (OECD Test Guideline 209)
Toxicity to fish(Chronic toxicity)	flow-through test LC50 - Danio rerio (zebra fish) - 9.8 mg/l - 28 d Remarks: (ECHA)

sodium deoxycholate

Toxicity to fish	LC50 - Oryzias latipes - 115 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to algae	- Pseudokirchneriella subcapitata (green algae) - 100 - 500 mg/l - 21 d Remarks: (ECOTOX Database)

Vitamin A acid

Toxicity to fish	LC50 - Danio rerio (zebra fish) - 0.00147 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	NOEC - Daphnia pulex (Water flea) - 0.0001 mg/l Remarks: (ECOTOX Database)

Bis(2-ethylhexyl) phthalate

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - > 0.67 mg/l - 96 h (OECD Test Guideline 203) Remarks: (above the solubility limit in the test medium)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 0.16 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata - > 0.003 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test NOEC - activated sludge - 1,000 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Pimephales promelas (fathead minnow) - 23.8 mg/l - 32 d Remarks: (above the solubility limit in the test medium) (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	flow-through test NOEC - Daphnia magna (Water flea) - 0.158 mg/l - 21 d (OECD Test Guideline 211) Remarks: (above the solubility limit in the test medium)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3082 IMDG: 3082 IATA: 3082

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (α-estradiol)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (α-estradiol)
IATA: Environmentally hazardous substance, liquid, n.o.s. (α-estradiol)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

14.6 Special precautions for user

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: 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.

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	: Quinoline
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: quinoline
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Bis(2-ethylhexyl) phthalate
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	: Ergocalciferol
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Bis(2-ethylhexyl) phthalate
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: quinoline

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.

Listed substance / Sunset Date	: Bis(2-ethylhexyl) phthalate

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

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

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H360F	May damage fertility.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture		**Classification procedure:**
Acute Tox.4	H332	Calculation method
Skin Irrit.2	H315	Calculation method
Eye Dam.1	H318	Calculation method
Skin Sens.1	H317	Calculation method
Muta.2	H341	Calculation method
Carc.1B	H350	Calculation method
Repr.1A	H360FD	Calculation method
Lact.	H362	Calculation method
STOT RE2	H373	Calculation method
STOT RE2	H373	Calculation method
Aquatic Acute1	H400	Calculation method
Aquatic Chronic1	H410	Calculation method

Further information

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