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

1.1 Product identifiers

Product name	:	PAHs - Loamy Clay 1
Product Number	:	CRM141
Brand	:	Sigma-Aldrich
REACH No.	:	This product is a mixture. REACH Registration Number see section 3.

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

1.4 Emergency telephone

Emergency Phone #	:	000 800 1007 141 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Carcinogenicity, (Category 1B)	H350: May cause cancer.
Specific target organ toxicity - repeated exposure, (Category 2)	H373: May cause damage to organs through prolonged or repeated exposure.
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	
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
Supplemental Hazard Statements	none
	Restricted to professional users.

Reduced Labeling (<= 125 ml)
Pictogram

Signal Word	Danger
Hazard Statements	
H350	May cause cancer.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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:
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 3: Composition/information on ingredients

3.2 Mixtures

Component		Classification	Concentration
benzo[a]pyrene 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.	50-32-8 200-028-5 601-032-00-3 *	Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H317, H340, H350, H360FD, H400, H410 Concentration limits: >= 0,01 %: Carc. 1B, H350;	>= 0,025 - < 0,1 %
Dibenz[a,h]anthracene			
CAS-No. EC-No. Index-No.	53-70-3 200-181-8 601-041-00-2 *	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H400, H410 Concentration limits: >= 0,01 %: Carc. 1B, H350; M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,025 - < 0,1 %
2,2',4,4',5,5'-Hexachlorobiphenyl			
CAS-No. Index-No.	35065-27-1 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 100 M-Factor - Aquatic Chronic: 100	>= 0,025 - < 0,1 %
2,2',3,4,4',5'-Hexachlorobiphenyl			
CAS-No. Index-No.	35065-28-2 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT	>= 0,025 - < 0,1 %

		RE 2, H373; M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	
2,2',3,4,4',5,5'-Heptachlorobiphenyl			
CAS-No. Index-No.	35065-29-3 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
2,2',4,5,5'-Pentachlorobiphenyl			
CAS-No. EC-No. Index-No.	37680-73-2 215-648-1 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
2,4,4'-Trichlorobiphenyl			
CAS-No. EC-No. Index-No.	7012-37-5 230-293-2 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
2,2',5,5'-Tetrachlorobiphenyl			
CAS-No. EC-No. Index-No.	35693-99-3 621-615-6 602-039-00-4 *	STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H373, H400, H410 Concentration limits: >= 0,005 %: STOT RE 2, H373; >= 0,005 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	>= 0,025 - < 0,1 %

2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene			
CAS-No. EC-No.	72-55-9 200-784-6 *	Acute Tox. 3; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H351, H372, H400, H410 M-Factor - Aquatic Acute: 100	>= 0,025 - < 0,1 %
1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane			
CAS-No. EC-No. Index-No.	50-29-3 200-024-3 602-045-00-7 *	Acute Tox. 3; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H311, H351, H372, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,025 - < 0,1 %
Aldrin			
CAS-No. EC-No. Index-No.	309-00-2 206-215-8 602-048-00-3 *	Acute Tox. 2; Acute Tox. 1; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H310, H351, H372, H400, H410 M-Factor - Aquatic Acute: 100	>= 0,025 - < 0,1 %
Dieldrin			
CAS-No. EC-No. Index-No.	60-57-1 200-484-5 602-049-00-9 *	Acute Tox. 2; Acute Tox. 1; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H310, H351, H372, H400, H410 M-Factor - Aquatic Acute: 100 M-Factor - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane			
CAS-No. EC-No.	72-54-8 200-783-0 *	Acute Tox. 3; Acute Tox. 4; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H312, H351, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,025 - < 0,1 %

chrysene 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.	218-01-9 205-923-4 601-048-00-0 *	Muta. 2; Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H341, H350, H400, H410 M-Factor - Aquatic Acute: 10	>= 0,025 - < 0,1 %
Benzo[k]fluoranthene 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.	207-08-9 205-916-6 601-036-00-5 *	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
Benzo[jk]fluorene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No.	206-44-0 205-912-4 *	Acute Tox. 4; Aquatic Acute 1; Aquatic Chronic 1; H302, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
anthracene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No.	120-12-7 204-371-1 *	Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H319, H400, H410 M-Factor - Aquatic Acute: 1.000 M-Factor - Aquatic Chronic: 100	>= 0,025 - < 0,1 %
Benzo[ghi]perylene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No.	191-24-2 205-883-8 *	Aquatic Acute 1; Aquatic Chronic 1; H400, H410 M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 1.000	>= 0,025 - < 0,1 %
Hexachlorobenzene			
CAS-No. EC-No. Index-No.	118-74-1 204-273-9 602-065-00-6 *	Carc. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H350, H372, H400, H410 M-Factor - Aquatic Acute: 100	>= 0,025 - < 0,1 %

		M-Factor - Aquatic Chronic: 100	
Endrin			
CAS-No. EC-No. Index-No.	72-20-8 200-775-7 602-051-00-X *	Acute Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H310, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,025 - < 0,1 %
Heptachlor			
CAS-No. EC-No. Index-No.	76-44-8 200-962-3 602-046-00-2 *	Acute Tox. 2; Carc. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H310, H351, H373, H400, H410 M-Factor - Aquatic Acute: 100	>= 0,025 - < 0,1 %
Quartz (SiO2)			
CAS-No. EC-No.	14808-60-7 238-878-4 *		>= 90 - <= 100 %

*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
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

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

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

5.2 Special hazards arising from the substance or mixture
silicon oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice 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.

5.4 Further information
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
Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. 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
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 carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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
Work under hood. Do not inhale substance/mixture.

Hygiene measures

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
Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

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

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection
protective clothing

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 P3

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
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	solid
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)	The product is not flammable.
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	No data available
i)	Autoignition temperature	Not applicable
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	Not classified as explosive.
t)	Oxidizing properties	none

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) .

10.3 Possibility of hazardous reactions
Violent reactions possible with:

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
Strong oxidizing agents

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
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
Possible carcinogen.

Reproductive toxicity
No data available

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.

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.

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.

Components

benzo[a]pyrene

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

Skin corrosion/irritation
Skin - Mouse
Result: Mild skin irritation
Remarks: (RTECS)

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity
May cause genetic defects.
Test Type: Ames test
Test system: Salmonella typhimurium
Result: positive
Remarks: (Lit.)
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: positive
Remarks: (National Toxicology Program)
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: positive
Remarks: (National Toxicology Program)
Species: Mouse - male - Bone marrow
Result: positive
Remarks: (National Toxicology Program)

Carcinogenicity
Presumed to have carcinogenic potential for humans

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

Dibenz[a,h]anthracene

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
Presumed to have carcinogenic potential for humans

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

2,2',4,4',5,5'-Hexachlorobiphenyl

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

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

2,2',3,4,4',5'-Hexachlorobiphenyl

Acute toxicity
Oral: No data available
Inhalation: No data available
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
Possible carcinogen.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

2,2',3,4,4',5,5'-Heptachlorobiphenyl

Acute toxicity
Oral: No data available
Inhalation: No data available
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
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

2,2',4,5,5'-Pentachlorobiphenyl

Acute toxicity
Oral: No data available
Inhalation: No data available
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
This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

2,4,4'-Trichlorobiphenyl

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
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

2,2',5,5'-Tetrachlorobiphenyl

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
May cause damage to organs through prolonged or repeated exposure.
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard
No data available

2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene

Acute toxicity
LD50 Oral - Rat - 87,0 mg/kg
Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
Inhalation: No data available
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
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
Limited evidence of carcinogenicity in animal studies

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Remarks: No data available
The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
Ingestion - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane

Acute toxicity
LD50 Oral - Rat - 87,0 mg/kg
Remarks: (RTECS)
Acute toxicity estimate Oral - 87 mg/kg
(ATE value derived from LD50/LC50 value)
Inhalation: No data available

LD50 Dermal - Rabbit - 300,0 mg/kg
Remarks: Behavioral:Tremor.
Behavioral:Muscle weakness.
Behavioral:Ataxia.
(RTECS)
Acute toxicity estimate Dermal - 300 mg/kg
(ATE value derived from LD50/LC50 value)

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
Suspected of causing cancer.

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.
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard
No data available

Aldrin

Acute toxicity
LD50 Oral - Rat - 38 mg/kg
Inhalation: No data available
Acute toxicity estimate Dermal - 300,1 mg/kg
(Expert judgment)

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
Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

Dieldrin

Acute toxicity
LD50 Oral - Rat - 38,3 mg/kg
Remarks: (RTECS)
Acute toxicity estimate Oral - 38,3 mg/kg
(Calculation method)
Inhalation: No data available
Acute toxicity estimate Dermal - 5,1 mg/kg
(Expert judgment)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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
Suspected of causing cancer.

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.
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard
No data available

2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane

Acute toxicity
LD50 Oral - Rat - 113,0 mg/kg
Remarks: (RTECS)
Acute toxicity estimate Oral - 113 mg/kg
(Calculation method)
Inhalation: No data available

LD50 Dermal - Rabbit - 1.200 mg/kg
Remarks: Behavioral:Excitement.
Behavioral:Convulsions or effect on seizure threshold.
Skin irritation
(RTECS)
Acute toxicity estimate Dermal - 1.200 mg/kg
(Calculation method)

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
Suspected of causing cancer.

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

chrysene

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
In vitro tests showed mutagenic effects
Test Type: Ames test
Test system: Salmonella typhimurium
Result: positive
Remarks: (Lit.)

Carcinogenicity
Possible human carcinogen

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

Benzo[k]fluoranthene

Acute toxicity
Oral: No data available
Inhalation: Irritating to respiratory system.
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
Presumed to have carcinogenic potential for humans

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

Benzo[jk]fluorene

Acute toxicity
LD50 Oral - Rat - 2.000 mg/kg
Remarks: (RTECS)
Acute toxicity estimate Oral - 2.000 mg/kg
(ATE value derived from LD50/LC50 value)
Inhalation: No data available
LD50 Dermal - Rabbit - 3.180 mg/kg
Remarks: (RTECS)

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

anthracene

Acute toxicity
LD50 Oral - Rat - male and female - > 16.000 mg/kg
Remarks: (ECHA)
Symptoms: Nausea, Diarrhea, gastric pain
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 1.320 mg/kg
Remarks: (ECHA)

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

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

Respiratory or skin sensitization
Intracutaneous test - Guinea pig
Result: negative
Remarks: (ECHA)

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
Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro
Test system: rat hepatocytes
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - Bone marrow
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - Nausea, Diarrhea, gastric pain

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Benzo[ghi]perylene

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
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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

Hexachlorobenzene

Acute toxicity
LD50 Oral - Rat - 10.000 mg/kg
LD50 Oral - Mouse - 4.000 mg/kg
LD50 Oral - Cat - 1.700 mg/kg
LD50 Oral - Rabbit - 2.600 mg/kg
LD50 Oral - Guinea pig - > 3.000 mg/kg
LD50 Oral - Quail - > 6.400 mg/kg
LD50 Oral - Mammal - > 5.000 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Change in motor activity (specific assay).
LC50 Inhalation - Rat - 3.600 mg/m3 - dust/mist
LC50 Inhalation - Mouse - 4.000 mg/m3 - dust/mist
LC50 Inhalation - Cat - 1.600 mg/m3 - dust/mist
LC50 Inhalation - Rabbit - 1.800 mg/m3 - dust/mist
Dermal: No data available

Skin corrosion/irritation
Remarks: No data available

Serious eye damage/eye irritation
Remarks: No data available

Respiratory or skin sensitization
Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions, or bullae

Germ cell mutagenicity
No data available

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

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

Endrin

Acute toxicity
LD50 Oral - Rat - 3,0 mg/kg
Inhalation: No data available
LD50 Dermal - Rat - 12,0 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
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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

Heptachlor

Acute toxicity
LD50 Oral - Mouse - 68,0 mg/kg
Remarks: (RTECS)
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Inhalation: No data available
LD50 Dermal - Rabbit - 500,0 mg/kg
Remarks: (RTECS)
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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
Suspected of causing cancer.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard
No data available

Quartz (SiO2)

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

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 : 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

Components

benzo[a]pyrene

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,25 mg/l - 48 h Remarks: (above the solubility limit in the test medium) (ECOTOX Database)
Toxicity to algae	static test ErC50 - Scenedesmus acutus - 0,005 mg/l - 72 h Remarks: (ECOTOX Database)

Dibenz[a,h]anthracene

No data available

2,2',4,4',5,5'-Hexachlorobiphenyl

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - > 0,001 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - > 0,001 mg/l - 48 h

2,2',3,4,4',5'-Hexachlorobiphenyl

No data available

2,2',3,4,4',5,5'-Heptachlorobiphenyl

No data available

2,2',4,5,5'-Pentachlorobiphenyl

No data available

2,4,4'-Trichlorobiphenyl

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - > 0,16 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 0,16 mg/l - 48 h

2,2',5,5'-Tetrachlorobiphenyl

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 0,03 mg/l -

96 h
Remarks: (ECOTOX Database)

Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Pimephales promelas (fathead minnow) - 0,025 mg/l - 94 d Remarks: (ECOTOX Database)

2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 0,01 mg/l - 96 h Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane LC50 - Lepomis macrochirus (Bluegill sunfish) - 0,01 mg/l - 96 h Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane LC50 - Oncorhynchus mykiss (rainbow trout) - 0,003400 mg/l - 96 h Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 0,00108 mg/l - 48 h Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
Toxicity to fish(Chronic toxicity)	NOEC - Oncorhynchus mykiss (rainbow trout) - 113 mg/l - 3,0 d Remarks: The value is given in analogy to the following substances: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane

1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0,003400 mg/l - 96,0 h Remarks: (ECOTOX Database) (Regulation (EC) No 1272/2008, Annex VI)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,00108 mg/l - 48 h Remarks: (ECOTOX Database) (Regulation (EC) No 1272/2008, Annex VI)

Aldrin

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0,01 mg/l - 96,0 h
Toxicity to daphnia and other aquatic	EC50 - Daphnia magna (Water flea) - 0,03 mg/l - 48 h

invertebrates

Dieldrin

Toxicity to fish	static test LC50 - Lepomis cyanellus - 0,011 mg/l - 96 h Remarks: (ECOTOX Database)

2,2-bis(4-Chlorophenyl)-1,1-dichloro-ethane

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0,06 - 0,09 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia pulex (Water flea) - 0,01 mg/l - 48 h

chrysene

No data available

Benzo[k]fluoranthene

No data available

Benzo[jk]fluorene

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,0077 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,117 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Pimephales promelas (fathead minnow) - 0,0014 mg/l - 32 d Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	Reproduction Test NOEC - Daphnia magna (Water flea) - 0,0014 mg/l - 21 d Remarks: (ECOTOX Database)

anthracene

Toxicity to fish	flow-through test LC50 - Lepomis macrochirus (Bluegill) - 0,002 mg/l - 96,0 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test LC50 - Daphnia magna (Water flea) - 0,036 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to daphnia and other aquatic invertebrates(Chronic	semi-static test EC10 - Ceriodaphnia dubia (water flea) - > 0,0034 mg/l - 7 d Remarks: (ECHA)

toxicity)

Benzo[ghi]perylene

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 0,0002 mg/l - 48 h
Toxicity to algae	Growth rate EC10 - Pseudokirchneriella subcapitata (green algae) - > 0,0016 mg/l - 72 h

Hexachlorobenzene

Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - 7,6 mg/l - 96,0 h NOEC - Pimephales promelas (fathead minnow) - > 0,0048 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - > 0,005 mg/l - 48 h

Endrin

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - < 0,001 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia pulex (Water flea) - 0,02 mg/l - 48 h
	Immobilization EC50 - Daphnia magna (Water flea) - 0,0042 mg/l - 48 h
Toxicity to fish(Chronic toxicity)	NOEC - Pimephales promelas (fathead minnow) - > 0,0002 - < 0,0006 mg/l - 45 d
	LOEC - Pimephales promelas (fathead minnow) - 0,00057 mg/l - 45 d

Heptachlor

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0,007 mg/l - 96,0 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 0,078 mg/l - 48 h Remarks: (ECOTOX Database)

Components

Quartz (SiO2)

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: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene)

IATA: Environmentally hazardous substance, solid, n.o.s. (2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene)

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

Tunnel restriction code : (-)

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.

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, mixtures and articles (Annex XVII)	: benzo[a]pyrene Dibenz[a,h]anthracene
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: chrysene
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benzo[k]fluoranthene

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: benzo[a]pyrene
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Dibenz[a,h]anthracene
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benz[a]anthracene
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: 1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane Aldrin Dieldrin Benzo[b]fluoranthene Hexachlorobenzene Indeno[1,2,3-cd]pyrene Endrin Heptachlor 2,2',4,4',5,5'-Hexachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',3,4,4',5,5'-Heptachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benzo[b]fluoranthene chrysene Benzo[k]fluoranthene benzo[a]pyrene Dibenz[a,h]anthracene Benz[a]anthracene
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benzo[b]fluoranthene

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
	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

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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:**
Carc.1B	H350	Calculation method
STOT RE2	H373	Calculation method
Aquatic Acute1	H400	Calculation method
Aquatic Chronic1	H410	Calculation method

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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