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

1.1 Product identifiers

Product name	:	Pesticides - Loam 1
Product Number	:	CRM818
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

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 Warning

Hazard Statements	
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)
Pictogram

Signal Word	Warning
Hazard Statements	none
Precautionary Statements	none
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
Endosulfan (α isomer)			
CAS-No. EC-No.	959-98-8 625-034-9 *	Acute Tox. 2; Acute Tox. 4; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H312, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0,025 - < 0,1 %
2,2-bis(p-Chlorophenyl)-1,1-dichloroethylene			
CAS-No.	72-55-9	Acute Tox. 3; Carc. 2;	>= 0,025 - <

EC-No.	200-784-6 *	STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H351, H372, H400, H410 M-Factor - Aquatic Acute: 100	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 %
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-Hexachlorocyclohexane			
CAS-No. EC-No. Index-No.	319-85-7 206-271-3 602-042-00-0 *	Acute Tox. 3; Acute Tox. 4; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H312, H351, H400, H410 M-Factor - Aquatic Acute: 10	>= 0,025 - < 0,1 %
Methoxychlor			
CAS-No. EC-No.	72-43-5 200-779-9 *	Acute Tox. 4; Repr. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H361fd, H400, H410 M-Factor - Aquatic Acute:	>= 0,025 - < 0,1 %

		1.000 - Aquatic Chronic: 1.000	
Gammaxene			
CAS-No. EC-No. Index-No.	58-89-9 200-401-2 602-043-00-6 *	Acute Tox. 3; Acute Tox. 4; Lact. ; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H332, H312, H362, H373, H400, H410 M-Factor - Aquatic Acute: 10 - 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 %
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 %
β-Endosulfan			
CAS-No. EC-No.	33213-65-9 625-635-6 *	Acute Tox. 3; Acute Tox. 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H330, 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.	14808-60-7		>= 90 - <=

EC-No.	238-878-4 *		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

If inhaled
After inhalation: fresh air.

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

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

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

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 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
In the event of fire, wear self-contained breathing apparatus.

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 inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

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

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Dry.

Store at Room Temperature.

Storage class
Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

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

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

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

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

Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P1

The 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
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Components

Endosulfan (α isomer)

Acute toxicity
Acute toxicity estimate Oral - 5,1 mg/kg
(Expert judgment)
Remarks: The value is given in analogy to the following substances: Endosulfan
Acute toxicity estimate Inhalation - 4 h - 0,0501 mg/l - dust/mist
(Expert judgment)
Remarks: The value is given in analogy to the following substances: Endosulfan
Acute toxicity estimate Dermal - 1.100,1 mg/kg
(Expert judgment)
Remarks: The value is given in analogy to the following substances: Endosulfan

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

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

(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-Hexachlorocyclohexane

Acute toxicity
Oral: No data available
Inhalation: No data available
LD50 Dermal - 1.100 mg/kg

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
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
No data available

Aspiration hazard
No data available

Methoxychlor

Acute toxicity
LD50 Oral - Mouse - 510 mg/kg
Remarks: Behavioral:Excitement.
Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia.
(RTECS)
Acute toxicity estimate Oral - 510 mg/kg
(ATE value derived from LD50/LC50 value)
Inhalation: No data available
LD50 Dermal - Rat - > 6.000 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
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

Gammaxene

Acute toxicity
LD50 Oral - Rat - 88,0 mg/kg
Remarks: (IUCLID)
Acute toxicity estimate Oral - 88 mg/kg
(ATE value derived from LD50/LC50 value)
LC50 Inhalation - Rat - 4 h - 1.560 mg/m3 - dust/mist
Remarks: (Lit.)
Acute toxicity estimate Inhalation - 1,56 mg/l - dust/mist
(ATE value derived from LD50/LC50 value)
Acute toxicity estimate Dermal - 1.500,1 mg/kg
(Expert judgment)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
Remarks: (IUCLID)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
Studies indicating a hazard to babies during the lactation period

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(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

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

β-Endosulfan

Acute toxicity
LD50 Oral - Rat - 240 mg/kg
Remarks: (RTECS)
LC50 Inhalation - Rat - 4 h - 80 mg/m3 - dust/mist
Remarks: (in analogy to similar products)
LD50 Dermal - Rabbit - 90 mg/kg
Remarks: (in analogy to similar products)

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

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

Endosulfan (α isomer)

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,0005 mg/l - 96 h 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 invertebrates	EC50 - Daphnia magna (Water flea) - 0,03 mg/l - 48 h

Dieldrin

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

(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-Hexachlorocyclohexane

No data available

Methoxychlor

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0,052 mg/l - 96 h

Remarks: (Lit.)

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,00078 mg/l - 48 h Remarks: (Lit.)
Toxicity to algae	EC50 - Scenedesmus quadricauda (Green algae) - 0,6 mg/l - 72 h Remarks: (Lit.)

Gammaxene

No data available

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

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

β-Endosulfan

Toxicity to fish	flow-through test LC50 - Fish - 0,0066 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 0,1 - 1 mg/l - 48 h

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. (Endosulfan (α isomer))
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Endosulfan (α isomer))
IATA: Environmentally hazardous substance, solid, n.o.s. (Endosulfan (α isomer))

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
Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Endosulfan (α isomer)
1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane

Aldrin
Dieldrin
(1α,2β,3α,4β,5α,6β)-1,2,3,4,5,6-Hexachlorocyclohexane
Gammaxene
(1α,2α,3β,4α,5β,6β)-1,2,3,4,5,6-Hexachlorocyclohexane
Endrin
β-Endosulfan
Heptachlor

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

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.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. 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.
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:**
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.