SAFETY DATA SHEET

Safety data sheet according to (EC) No. 1907/2006

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

1.1. Product identifier:
Linseed oil paint Outdoor – Category 6
1.2. Relevant identified uses of the substance or mixture and uses advised against:
Paint for outdoor use on buildings etc. Applied with brush, roller etc.
1.3. Details of the supplier of the safety data sheet:
Linolie & Pigment
Øsbygade 46 Phone: 7575 2382
DK-6100 Haderslev
Responsible person for the safety data sheet (e-mail): info@linolie.dk
1.4. Emergency telephone number:
NHS (England or Wales): Dial 111 or 0845 4647 NHS 24 (Scotland): Dial 111
National Poisons Information Centre (Ireland): +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).
Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:
Sensitizing and irritant liquid. Hazardous to the aquatic environment.
CLP (1272/2008): Skin Sens. 1;H317 Skin Irrit. 2;H315 Eye Irrit. 2;H319 Aquatic Chronic 2;H411
2.2. Label elements:

WARNING

Contain: 4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P264: Wash hands thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P501: Dispose of contents/container in accordance with applicable regulations.
EUH211: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
2.2. Other hazards:
Rags soaked with the product may cause spontaneous combustion.
PBT/vPvB: No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.
Endocrine disrupting properties: The substances are not identified as having endocrine disrupting properties in accordance with the criteria set out in Regulation 2017/2100 or Regulation 2018/605.

SECTION 3: Composition/information on ingredients

3.2. Mixtures: Mixture based on linseed oil.

% w/w	Substance name	CAS-no.	EC-no.	Index-no.	REACH reg.-no.	Classification	Note
<75	Triiron tetraoxide	1317-61-9	215-277-5	-	01-2119457646-28	None	1
<60	Diiron trioxide	1309-37-1	215-168-2	-	01-2119457614-35	None	1
<50	Titanium dioxide	13463-67-7	236-675-5	022-006-00-2	01-2119489379-17	Carc. 2;H351i	1,2
2.5-<20	Zinc oxide	1314-13-2	215-222-5	030-013-00-7	01-2119463881-32	Aquatic Acute 1;H400 (M=1) Aquatic Chronic 1;H410	-
<10	Carbon black	1333-86-4	215-609-9	-	01-2119384822-32	None	1,3
<1	Manganese dioxide	1313-13-9	215-202-6	025-001-00-3	01-2119452801-43	Acute Tox. 4;H332+H302 STOT RE 2;H373	1,4
< 0.1	4,5-Dichloro-2-octyl-*2H*-isothiazol-3-one	64359-81-5	264-843-8	-	-	Acute Tox 2;H330 Acute Tox 4;H302 Skin Sens.1A;H317 Skin Corr. 1;H314 Eye Dam. 1;H318 Aquatic Acute 1;H400 (M=100) Aquatic Chronic 1;H410 (M=100)	5

1) The substance has an occupational exposure limit.
2) The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1% or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 μm.
3) The substance is only present in some colours.
4) ATE (oral) = 500 mg/kg; ATE (inhalation, dust/spray) = 1,5 mg/l
5) SCL (Specific Concentration limits) for classification: Skin Irrit. 2;H315/Eye Irrit. 2;H319: 0.025% ≤ C < 3%; Skin Sens. 1A;H317: C ≥ 0.0015% (EU Harmonized). ATE (oral) = 567 mg/kg; ATE (inhalation) = 0.16 mg/l (dusts/mists)

Wording of hazard statements - see section 16.

SECTION 4: First-aid measures

4.1. Description of first aid measures:

Inhalation: Move the affected person to fresh air. Keep at rest. If symptoms persist: Seek medical advice.

Skin contact: Remove all contaminated clothing. Wash skin with water and mild soap. In case of rash, wound, or other skin irritation: Seek medical advice.

Eye contact: Flush with water or physiological salt water, holding eyelids open; remember to remove contact lenses, if any. If irritation persist: Seek medical advice.

Ingestion: Rinse mouth and drink plenty of water. **Do not induce vomiting.** If vomiting occurs keep head down to avoid vomit in the lungs. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed:

Skin sensitization and irritation with redness, itching, blisters and eczema. Causes serious eye irritation with redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed:

Show this safety data sheet to a physician or emergency ward.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Use carbon dioxide, dry chemical or foam.

5.2. Special hazards arising from the substance or mixture:

Do not inhale smoke fumes. In case of fire, the substance may form hazardous decomposition products: Primarily oxides of carbon.

5.3. Advice for firefighters:

Wear self-contained breathing apparatus when generation of smoke is vigorous.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:
Use gloves of rubber when spill is wiped up – see section 8. Avoid further spreading. Ventilate area of spill.
6.2. Environmental precautions:
Do not empty into drains – see section 12. Inform appropriate authorities in accordance with local regulations.
6.3. Methods and material for containment and cleaning up:
Take up with absorbent material (e.g. general-purpose binder) and place in marked container for disposal. All contaminated rags, paper etc. may be subject to spontaneous combustion under certain conditions. Place all contaminated material in a metal container, which contains water, with a tight-fitting lid. Remove from premises immediately. Clean with water. Dispose of in accordance with local regulations or burn under controlled conditions. Further handling of spillage - see section 13.
6.4. Reference to other sections:
See references above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:
Avoid contact with skin, eyes and clothing. Provide sufficient ventilation. Wash contaminated skin immediately with water and mild soap. Contaminated clothes or absorbent material is kept under water until disposal or cleaning. Moisturisers prevents drying of the skin and may be used with great advantage after work. Required access to water and eye wash fountain.
7.2. Conditions for safe storage, including any incompatibilities:
Store in a tightly closed original container of metal. Keep in a dry and well-ventilated place.
Store securely and out of reach of unauthorized personnel and separated from food, feed, drugs etc.
7.3. Specific end use(s):
See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:
Occupational exposure limits, UK (EH40/ed.2020):

Substance	**8-hour TWA**	**15-min STEL**	**Comments**
Titanium dioxide, total inhal.	10 mg/m^3	-	-
Iron oxide, fume (as Fe)	5 mg/m^3	10 mg/m^3	-
Manganese and its inorganic compounds (as Mn)	0.2 mg/m^3	-	E
Carbon black	3.5 mg/m^3	3.5 mg/m^3	-

E: The substance has a Community exposure limit.

Occupational exposure limit values, Ireland (2020):	**8-hour TWA**	**15-min STEL**	**Notes**
Titanium dioxide, total inhal.	10 mg/m^3	-	-
Titanium dioxide, respirable dust	4 mg/m^3	-	-
Iron oxide, fume (as Fe)	5 mg/m^3	10 mg/m^3	-
Zinc oxide, fume	2 mg/m^3 (R)	10 mg/m^3	-
Manganese and inorganic manganese compounds (as Mn)	0.2 mg/m^3 (I)/ 0.05 mg/m^3 (R)	-	IOELV
Carbon black	3 mg/m^3 (I)	-	-

I: Inhalable fraction
IOELV: Indicative Occupational Exposure Limit Values
R: Respirable Fraction

SECTION 8: Exposure controls/personal protection (continued)

DNEL:	Exposure	Value	Population	Effects
Zinc oxide	Long term, inhalation	6.2 mg/m^3	Worker	Local
	Long term, dermal	6223 mg/kg/d	Worker	Local
	Long term, oral	62.2 mg/kg/d	Worker	Local
	Long term, inhalation	6.2 mg/m^3	Consumer	Local
	Long term, dermal	622 mg/kg/d	Consumer	Local
Manganese dioxide	Long term, inhalation	0.06 mg/m^3	Worker	Systemic
	Long term, dermal	0.004 mg/kg/d	Worker	Systemic
	Long term, inhalation	0.043 mg/m^3	Consumer	Systemic
	Long term, dermal	0.002 mg/kg/d	Consumer	Systemic

PNEC:	Medium	Value
Zinc oxide	Fresh water	25.6 µg/l
	Sea water	7.6 µg/l
	Fresh water sediment	146 mg/kg
	Sea water sediment	70.3 mg/kg
	Sewage treatment plant	64.7 µg/l
	Soil	44.3 mg/kg
Manganese dioxide	Fresh water	0.001 mg/l
	Sea water	500 mg/l
	Fresh water sediment	500 mg/kg
	Sea water sediment	0.004 mg/kg
	Sewage treatment plant	100 mg/l
	Soil	0.028 mg/kg

8.2. Exposure controls:

Appropriate engineering controls: Provide sufficient ventilation.

Personal protective equipment:

Inhalation: Normally not required when applied with brush or roller.

Skin: Wear protective gloves of nitrile rubber (> 0.3 mm) (EN 374). It has not been possible to find data for breakthrough time. In case of spill on the glove, it is recommended to change it after use.

Eyes: Wear tight fitting safety goggles (EN 166) when there is risk of splashes.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Physical state:	Liquid
Colour:	Different colours
Odour:	Linseed oil
Melting point/freezing point (°C):	Not determined
Boiling point or initial boiling point and boiling range (˚C):	Not determined
Flammability (solid, gas):	Not relevant (liquid)
Lower and upper explosion limit (vol-%):	Not determined
Flash point (°C):	App. 220 (for pure linseed oil)
Auto-ignition temperature (°C):	Not relevant
Decomposition temperature (°C):	Not determined
pH:	Not determined
Kinematic viscosity:	Not determined
Solubility:	Insoluble in water
Partition coefficient n-octanol/water (log value):	Not determined
Vapour pressure:	Not determined
Density and/or relative density:	<2
Relative vapour density:	Not determined
Particle characteristics:	Not relevant for liquids
9.2. Other information:	None relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity:
No available data.
10.2. Chemical stability:
Stable under normal conditions (see section 7).
10.3. Possibility of hazardous reactions:
Warning: Combustible materials such as rags, paper or cloths soaked with the product may cause spontaneous combustion
10.4. Conditions to avoid:
Avoid excessive heating.
10.5. Incompatible materials:
May react with oxidizing materials.
10.6. Hazardous decomposition products:
In case of extensive heating, the mixture may form hazardous decomposition product such as oxides of carbon, short chain fatty acids, polymers and acrolein.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:
Acute toxicity: Based on available data, the classification criteria are not met.
Skin corrosion/irritation: Skin Irrit. 2;H315 Causes skin irritation.
Serious eye damage/irritation: Eye Irrit. 2;H319 Causes serious eye irritation.
Respiratory or skin sensitization: Skin Sens. 1A;H317 May cause an allergic skin reaction.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Hazard class	Data	Test	Data source
Acute toxicity:			
Inhalation	LC_{50} (rat) = 0.16 mg/l/4h (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 403	Supplier
	LC_{50} (rat) > 5700 mg/m^3/4h (Zinc oxide, dust/spray)	No data	Supplier
	LC_{50} (rat) > 6.8 mg/l/4h (Titanium dioxide)	No data	Supplier
Dermal	LD_{50} (rabbit) > 652 mg/kg (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 402	Supplier
Oral	LD_{50} (rat) > 15 g/kg (Linseed oil)	No data	Supplier
	LD_{50} (rat) > 15 g/kg (Zinc oxide)	No data	Supplier
	LD_{50} (rat) > 10 g/kg (Titanium dioxide)	No data	Supplier
	LD_{50} (rat) > 5 g/kg (Iron oxide)	No data	Supplier
	LD_{50} (rat) = 567 mg/kg (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 401	Supplier
	LD_{50} (rat) > 8000 mg/kg (Carbon black)	No data	Supplier
Corrosion/ irritation:	Moderate skin irritation, man (Linseed oil)	Draize	RTECS
	Corrosion, rabbit (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 404/405	Supplier
Sensitization:	Skin sensitization, guinea pig (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 406	Supplier
CMR:	No mutagenicitet – negative result (Linseed oil)	No data	TOXNET
	No effect on fertility/offspring (Linseed oil)	No data	TOXNET
	No carcinogen effects in animals (Linseed oil)	No data	TOXNET

Information on likely routes of exposure: Skin and ingestion.

SECTION 11: Toxicological information (continued)

Symptoms:

Inhalation: Slight irritation of the airways. Manganese dioxide may cause pneumonia without the influence of infectious agents.

Skin: May cause irritation with redness by prolonged contact with skin.

Eyes: May cause irritation with redness and pain.

Ingestion: May cause irritation of the gastrointestinal tract and discomfort, nausea and diarrhea.

Chronic effects: Frequent skin contact with 4,5-dichloro-2-octyl-2H-isothiazol-3-one may cause skin sensitisation with symptoms such as redness, itching, blisters and eczema.
Titanium dioxide is classified by IARC as group 2B (Possibly carcinogenic to humans). However, this classification does not lead to a CLP classification as carcinogenic. There is no significant exposure to titanium dioxide from liquid products containing titanium dioxide (IARC, Vol. 93).
Manganese compounds may reduce the immune defence system in the airways and cause metal fume fever. Damages of the testicles, impotence, decreased sexual activity and decreased fertility.
Carbon black is recorded in the Danish Working Environment Authority's list of substances considered to be carcinogenic. The substance has caused cancer when inhaled in animal experiments (rats), but since this material is not expected to be possible to inhale, the risk of developing cancer in humans in connection with working with the product is therefore considered minimal. In several experiments with mice, no carcinogenic effect on the skin is observed.

11.2. Information on other hazards: None known.

SECTION 12: Ecological information

12.1. Toxicity:

Aquatic	Data	Test (Media)	Data source
Fish	LC_{50} (Danio rerio, 96h) = 1.79 mg/l (Zinc oxide)	No data (FW)	ECHA
	LC_{50} (Oncorhynchus mykiss, 96h): 1.1-2.5 mg/l (Zinc oxide)	No data (FW)	Supplier
	LC_{50} (Idus dorata, 96h) > 1000 mg/l (Iron oxide)	No data	Supplier
	LC_{50} (Fish, 96h) = 0.003 mg/l (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 203	Supplier
Daphnia	EC_{50} (Daphnia magna, 48h) = 0.0052 mg/l (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	No data (FW)	Supplier
Algae	EC_{50} (Selenastrum capricornutum, 72h) = 0.17 mg/l (Zinc oxide)	OECD 201 (FW)	IUCLID
	NOEC (Pseudokirchneriella subcapitata, 72h) = 0.017 mg/l (Zinc oxide)	No data (FW)	Supplier
	EC_{50} (Pseudokirchnerella subcapitata, 96h) = 0.077 mg/l (4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)	OECD 201 (FW)	Supplier

12.2. Persistence and degradability:

Methods are missing for determining the biodegradability for inorganic substances such as pigments.
4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one was degraded 0% at an OECD 301B test and is not considered rapidly degradable.

12.3. Bioaccumulative potential:

Zinc oxide: Log K_{ow} = 2.2 (moderate bio accumulative effect).
4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one: Log K_{ow} = 3.59 (moderate bioaccumulative effect).

12.4. Mobility in soil:

Zinc oxide: K_{oc} < 50 (very high mobility expected in soil environments).

12.5. Results of PBT and vPvB assessment:

No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

12.6. Endocrine disrupting properties:

None known.

12.7. Other adverse effects:

4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one is considered an organic halogen compound (AOX).

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

The mixture is not considered as hazardous waste. Disposal should be according to local, state or national legislation. Dispose of through authority facilities or pass to chemical disposal company.
Waste from linseed oil paint must be immersed in water to avoid spontaneous combustion.

EWC-code:

08 01 11 (mixture itself) and 15 02 02 (Paper towel, inert material etc. contaminated with the mixture)

SECTION 14: Transport information

14.1. UN number or ID number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc oxide; 4,5-Dichloro-2-octyl-2*H*-isothiazol-3-one)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards: Yes
14.6. Special precautions for user: None.
14.7. Maritime transport in bulk according to IMO instruments: Not relevant.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:
Must not be used by persons under 18 years of age.
Special labelling:
VOC subcategory: A/d
VOC limit value (g/l): 300
VOC content (g/l): < 5

Danish 1993-Code no.: 00–1
15.2. Chemical safety assessment:
The product contains at least one substance with an exposure scenario. RMM and OC here from have been incorporated in this SDS.

SECTION 16: Other information

Hazard statements mentioned in section 3:
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H330: Fatal if inhaled.
H332+H302: Harmful if inhaled or swallowed.
H351i: Suspected of causing cancer.
H373: May cause damage to organs (brain) through prolonged or repeated exposure (inhalation).
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
Abbreviations:
CMR = Carcinogenicity, mutagenicity and reproductive toxicity.
CSR = Chemical Safety Report
DNEL = Derived No-Effect Level
EC_{50} = Effect Concentration 50%
FW = Fresh Water
LC_{50} = Lethal Concentration 50%
LD_{50} = Lethal Dose 50%
PBT = Persistent, Bioaccumulative, Toxic
PNEC = Predicted No-Effect Concentration
vPvB = very Persistent, very Bioaccumulative
Literature:
ECHA = REACH Registration dossier from ECHA's home page.
IARC = International Agency for Research on Cancer
IUCLID = International Uniform ChemicaL Database Information
RTECS = Register of Toxic Effects of Chemical Substances.
TOXNET = Toxicology Data Network via Toxline database

SECTION 16: Other information (continued)

Training advice:
No special training is required. However, the user should be well instructed in the execution of his/her task, be familiar with this Safety Data Sheet and have normal training in the use of personal protective equipment.
Changes since the previous edition:
Not relevant

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