SAFETY DATA SHEET

Issue date: 21 Sep. 2012
Supersedes: 10 Feb. 2010

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

1.1. Product identifier	Linseed Oil Paint
1.2 Relevant identified uses of the substance or mixture and uses advised against	For outdoor and indoor painting. For painting on wood, concrete, wallpaper and other materials. Sector Use - SU: SU19 Building and construction work SU20 Health services SU21 Private households (= general public = consumers) SU22 Professional uses: Public domain Chemical Product Category: PC9a Coatings and paints Process categories [PROC]: PROC10 Roller application or brushing Environmental Release Categories: ERC 8C Wide dispersive indoor use resulting in inclusion into or onto a matrix (paint) ERC 8F Wide dispersive outdoor use resulting in inclusion into or onto a matrix (paint)
1.3 Details of the supplier of the safety data sheet	
Supplier/Importer EU	Allbäck Linoljeprodukter AB
Address	Östra Balkåkravägen 18 SE-271 91 Ystad Sweden
Telephone number	+46-411-606 02
Fax	+46-411-602 41
Contact person	Sonja Allbäck
e-post	allback@allbackpaint.com
1.4 Emergency telephone number	24 hours service is available at NHS Direct in UK: Phone 0845 46 47 or call 112 or 999 See. www.nhsdirect.nhs.uk
MSDS issued by	Ann Martens, Ramböll Sverige AB, +46 (0)10-615 54 47

Section 2: Hazards identification

2.1 Classification of the substance or mixture
Not classified as hazardous for health or environment.

2.2 Label elements
No hazard label required.
Other label required according to DSD
Interior and exterior minimal build woodstains, category f, VOC < 38 g/l. Limit Phase II, from 2010.
"Safety data sheet for professional users available upon request"

2.3 Other hazards

Risk for spontaneous combustion if the linseed oil is absorbed by porous organic material (cotton waste or rag). This oxidation, which give rise to heat can happen even at room temperature, but raised temperature increases the risk.

Section 3: Composition / information on ingredients

3.1 Substances

3.2 Mixtures

EC-no	CAS-no	Name of component	Conc. wt/wt	Classi-fication	Com
232-278-6	8001-26-1	Linseed oil	100 %	-	-
240-085-3	15956-58-8	2-Ethylhexanoic acid, manganese salt	0,07 mg/litre paint	CLP: Skin Irrit 2, H315 DSD: Xi; R38	
236-675-5	13463-67-7 REACH-reg nr. 01-2119489379-17-0021 och 01-2119489379-17-0022	Titanium dioxide	0-30 %. Varies with the colour. See below.		WEL
215-279-6	1317-65-3	Chalk (Calcium carbonate)	15-30 % Varies with the colour		WEL
		Different colours			
236-675-5	13463-67-7	White Titanium dioxide (no extra pigment)	27-30 % < 1% Iron oxide		WEL
236-675-5	13463-67-7	Old White Titanium dioxide Iron oxide	27-30 % < 1% Iron oxide		WEL
236-675-5	13463-67-7	Vintage Titanium dioxide Iron oxide	25-30 % < 1 % Iron oxide		WEL
236-675-5	13463-67-7	Sea Mist Titanium dioxide Iron oxide	25-30 % < 1 % Iron oxide		WEL
236-675-5	13463-67-7 20344-49-4 1317-61-9	Parchment Titanium dioxide Iron oxide (FeOOH) Iron oxide (Fe3O4)	25-30 % < 1 % Iron oxide		WEL
236-675-5	13463-67-7	Custard Titanium dioxide Iron oxide (FeOOH)			WEL

236-675-5	13463-67-7	Barley White Titanium dioxide Iron oxide	25-30 % < 1 % Iron oxide		WEL
236-675-5 243-746-4	13463-67-7 20344-49-4	Buttermilk Titanium dioxide Iron oxide (FeOOH)	25-30 % 1-3 % Iron oxide		WEL
236-675-5 215-277-5 215-277-5	13463-67-7 1317-61-9 1308-38-9 REACH-nr 01-2119433951-39	Oyster Green Titanium dioxide Iron oxide (Fe3O4) Chrome (III) oxide	25-30 % 1% Iron oxide 1 % Chromium oxide		WEL WEL
236-675-5 215-168-2 215-277-5	13463-67-7 1309-37-1 1317-61-9	Houghton Brown Titanium dioxide Iron oxide (Fe 2O3) Iron oxide (Fe3O4)	1-4% 5-12 % Iron oxide 15-25 % Iron oxide		WEL WEL
236-675-5 243-746-4 215-277-5	13463-67-7 20344-49-4 1317-61-9	Silver Grey Titanium dioxide Iron oxide (FeOOH) Iron oxide (Fe3O4)	25-30 % 1 % Iron oxide 1 % Iron oxide		WEL
243-746-4	20344-49-4	Old Gold Iron oxide (FeOOH)	18-25 % Iron oxide		
215-277-5 215-160-9	1317-61-9 1308-38-9 REACH-no 01-2119433951-39	Sprauce Green Iron oxide (FeOOH) Chromium (III) oxide	15-20 % Iron oxide		WEL
215-160-9	1308-38-9 REACH-no 01-2119433951-39	Chrome Oxide Green Chromium (III) oxide	25 % Chromium oxide		WEL
236-675-5 243-746-4 215-277-5 215-160-9	13463-67-7 20344-49-4 1317-61-9 1308-38-9 REACH-no 01-2119433951-39	Lichen Titanium dioxide Iron oxide (Fe OOH) Iron oxide (Fe3O4) Chromium (III) oxide	20-25 % Titanium dioxide 1-3 & Iron oxide (Fe00H) 1-4 & Iron oxide (Fe3O4) 5-8 % Chromium (III) oxide		WEL WEL
309-928-3	101357-30-6	Ultramarine Blue Silicic acid, aluminum sodium salt,	20-25 % Ultra marine blue		

		sulfurized			
247-304-1 309-928-3 215-160-9	25869-00-5 101357-30- 61308-38-9 1308-38-9 REACH-no 01- 2119433951- 39 1308-38-9	Linseed Blue Titanium dioxide Silicic acid, aluminum sodium salt, sulfurized Chromium oxide	15-20 % Titanium dioxide 7 % Ultramarine blue 3 % Chromium oxide		WEL WEL
309-928-3 243-746-4 215-277-5	101357-30-6 20344-49-4 1317-61-9	Midnight Blue Silicic acid, aluminum sodium salt, sulfurized Iron oxide (FeOOH) Iron oxide (Fe3O4)	17-20 % Ultramarine blue 1 % iron oxide 1-2 % Iron oxide		
309-928-3 243-746-4 215-277-5	101357-30-6 20344-49-4 1317-61-9	Old Blue Silicic acid, aluminum sodium salt, sulfurized Iron oxide (FeOOH) Iron oxide (Fe3O4)	11-14 % Ultramarine blue < 1 % iron oxide 1-2 % Iron oxide		
247-304-1 309-928-3 215-277-5	25869-00-5 101357-30-6 1317-61-9	Ice Blue Titanium dioxide Silicic acid, aluminum sodium salt, sulfurized Iron oxide (Fe3O4)	15-290 % Titanium dioxid 17-20 % Ultramarine blue < 1 % iron oxide		
215-277-5 215-160-9	1317-61-9 1308-38-9 REACH-nr 01- 2119433951- 39	Holkham green Iron oxide (Fe3O4) Chromium (III) oxide	10-15 % iron oxide 20-30 % Chromium oxide		WEL
215-168-2	1309-37-1	Iron primer Iron oxide (Fe2O3)	35-45 % Iron oxide		WEL
215-168-2	1309-37-1	Brick red Iron oxide (Fe2O3)	30-35 % Iron oxide		WEL
215-168-2 215-277-5 309-928-3	1309-37-1 1317-61-9 101357-30-6	Old red Iron oxide (Fe2O3) Iron oxide (Fe3O4) Silicic acid, aluminum sodium salt, sulfurized	20-24 % Iron oxide 7-10 % Iron oxide 1-2 % Ultramarin blue		WEL
		Chocolate			

215-168-2 215-277-5	1309-37-1 1317-61-9	Iron oxide (Fe2O3) Iron oxide (Fe3O4) (Mixture of these iron oxides, the supplier does not give the exact content)	30-40 % Iron oxides		WEL
		Verona brown Iron oxide (Fe2O3) Iron oxide (Fe3O4) (Mixture of these iron oxides, the supplier does not give the exact content)	30-40 % Iron oxides		
243-746-4	20344-49-4	Antique Gold Iron oxide (FeOOH)			
215-277-5	1317-61-9	Black Iron oxide (Fe3O4)	40-45 % Iron oxide		
236-675-5 215-168-2 243-746-4 215-277-5	13463-67-7 1309-37-1 20344-49-4 1317-61-9	Old rose Titanium dioxide Iron oxide (Fe 2O3) Iron oxide (FeOOH) Iron oxide (Fe3O4)	10 % Titanium dioxide 10-14 % 1 % 1%		WEL WEL
243-746-4 215-277-5	20344-49-4 1317-61-9	Green Umber Iron oxide (FeOOH) Iron oxide (Fe3O4)	17-20 % (FeOOH) 10-13 % (Fe3O4)		
236-675-5 215-168-2 215-277-5	13463-67-7 1309-37-1 1317-61-9	Graphite Grey Titanium dioxide Iron oxide (Fe 2O3) Iron oxide (Fe3O4) (The supplier does not give the exact content)	5 % Titanium dioxide 25-35 % Iron oxides		WEL WEL
		Other colours are mixtures of the above colours			

Explanation of abbreviations:
CAS-nr. = Chemical Abstracts Service; EU-nr (Einecs- or Elincsnumber) = European Inventory of Existing Commercial Chemical Substances or European LIst of Notified Chemical Substances, DSD = Dangerous Substance Directive. CLP = Regulation Classification and Labelling of Packages.
Content specified as; %, %wt/wt, %vol/wt, %vol/vol, mg/m^3, ppb, ppm, wt%, vol%.
WEL = The product have a workplace exposure limit, PBT = The product is declared since it 's a PBT- or a vPvB-substance.

Comments: Linseed oil contains mainly natural triglycerides from oleic, linoleic, cetylic acid, linolenic acid and stearic acid. CAS 8554-56-3 is also possible for the product. The product contains 0.01-0.1 % quartz that is naturally present in chalk. The amount of respirable quartz is very low. Ultramarine blue is a synesthetic variant of the natural pigment Lapis lazuli.

For risk phrases in plain text, see section 16.

Section 4: First aid measures

4.1 Description of first aid measures	
Inhalation	Not relevant, except when spraying the product. If irritation occurs, move to fresh air and rest.
Skin contact	Wash the skin with water and linseed soap.
Eye contact	Remove contact lenses. Rinse the eyes for a couple of minutes. If symptoms persist, seek a physician.
Ingestion	Drink copious amounts of milk. The product is a laxative in large amounts, but no risk for intoxication.
4.2 Most important symptoms and effects, both acute and delayed	
Inhalation	May cause some transient irritation to the respiratory tract.
Skin contact	Has no effect on skin.
Eye contact	Provides transient mild irritation.
Ingestion	Laxative.
4.3. Indication of any immediate medical attention and special treatment needed	Access to water for rinsing eyes at the working place.

Section 5: Firefighting measures

5.1 Extinguishing media a. Recommended Extinguishing media b. Not Recommended Extinguishing media	a. Extinguish e.g. with foam, carbon dioxide, powder or water spray depending on what is burning b. Foam containing substances that are harmful for the environment, i.e. Perfluoro octane sulfonate (PFOS) and Nonyl ethoxylate
5.2 Special hazards arising from the substance or mixture	Can self-ignite at 343 ºC. Can oxidize in rags and other porous material and cause increased heating of the material until it ignites.
5.3 Advise for firefighters	Avoid inhaling of smoke fumes. Wear self-contained breathing apparatus for fire fighting if necessary. Cool fire exposed surfaces.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel	Wash skin or contaminated clothes with water.
6.1.2 For emergency responders	Wash with water.
6.2 Environment precautions	Prevent discharge to the sewage system.

6.3 Methods and material for containment and cleaning up 6.3.1. Surrounding embankment /sealing 6.3.2 Recommended cleaning up measures 6.3.3 Non-recommended measures	Make embankments with sand or other inert absorbent and collect. Small amounts can be washed away with water. The product is easily biodegradable in nature.
6.4 Reference to other sections	For personal protection see section 8. For disposal of waste, see section 13.

Section 7: Handling and storage

7.1 Precaution for safe handling	Avoid spills and prevent large quantities of the product to reach sewage system or surface water. Avoid eating, drinking and smoking in the working area. Wash hands after using the product. Remove contaminated clothing before meals are taken
7.2 Condition for safe storage, including any incompatibilities	Store out of reach of children and away from food.
7.3 Specific end use(s)	No specific end uses.

Section 8: Exposure controls/personal protection

8.1 Control parameters
National occupational exposure limits values, EH 40, 2005 with updates

CAS-nr	Substance name	WEL 8 h	WEL 5 min	WEL 15 min
1309-37-1	Iron oxide fume (as Fe)	5 mg/m^3		10 mg/m^3
13463-67-7	Titanium dioxide total inhalable respirable	 10 mg/m^3 4 mg/m^3		
1317-65-3	Calcium carbonate inhalable dust respirable	 10 mg/m^3 4 mg/m^3		
	Chromium (III) compounds (as Cr)	0.5 mg/m^3		

WEL=Workplace Exposure Limit

PNEC and DNEL/DMEL not established for linseed oil.
Values below from REACH registration of titanium dioxide.

CAS-no	Substance	PNEC (type of	DN(M)EL (route of exposure)	Expo- sure

		environment)		scen-ario annex
13463-67-7	Titanium dioxid	PNEC (aqua freshwater) 0,127 mg/L PNEC (aqua marine water) 1 mg/L PNEC aqua (intermittent releases) 0,61 mg/L PNEC STP 100 mg/L PNEC sediment (fresh water) 1000 mg/kg Sediment dw PNEC sediment (marine water) 100 mg/kg sediment Dd PNEC soil 100 mg/kg dw	Workers Longtime exposure local effect DNEL Inhalation 10 mg/m³ Consumers Longtime exposure systemic effect Oral DNEL 700 mg/kg bodyweight/day For other DNEL/DMEL data is missing	Saknas

Biological limit values	None
Recommended surveillance procedure	None

8.2 Exposure controls

8.2.1 Recommended technical control measures	None
8.2.2 Individual protection measures, e.g. personal protection equipment	
Eye/face protection	None. When spraying the product, use safety goggles.
Skin protection i) Hand protection (material, thickness, breakthrough time) ii) Other protection	i) At prolonged contact with the product use gloves e.g. PVC, nitrile or butyl. Always use gloves when painting with colour containing chromium. Breakthrough is not known, but probably > 8 hrs. ii) Normal working clothes. No special protection
Respiratory protection	If spraying the product and a hazard to surpass any

	occupational exposure value use a half mask with particle filter P2.
8.2.3 Environmental exposure limits	Avoid large leakage to surface water or sewage system

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance/Form /State	Liquid
Odour	Characteristic linseed oil.
Melting point/freezing point	Appr. -19 ºC
Initial boiling point and boiling range	Appr. 316 ºC
Flash point	216 ºC
Evaporation rate	Not determined
Self ignite temperature	343 ºC
Upper/lower flammability or explosive limits	Not determined
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	1.3-1.7 kg/l (depending on colour)
Solubility	Linseed oil will only emulsify in water. Low water solubility <1 g/l. The product is partly soluble in several solvents, but it is not recommended to mix with organic solvents.
Partition coefficient n-octanol/water	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	None
Oxidizing properties	None
VOC content	< 18 g/l

9.2 Other information

Emission Factor, Volatile organic compounds, TVOC	64 µg/(m^2xh) after 4 hours? drying time of linseed oil paint (white paint), 18 µg/(m^2xh) after 26 week drying time.

Section 10: Stability and reactivity

10.1 Reactivity	The product is not reactive during normal handling and storage conditions.
10.2 Chemical stability	Stable at normal storing conditions
10.3 Possibility of hazardous reactions	None
10.4 Conditions to avoid	Do not store above normal room temperature.
10.5 Incompatible materials	Strong acids, bases and oxidizing agents.
10.6 Hazardous decomposition	None except for colours containing ultramarine pigment.

products	This pigment can emit hydrogen sulphide in contact with acids. Chrome (III) oxide can transform to chrome (VI) when heated. Chrome (VI) is a strong sensitizer and carcinogenic.

Section 11: Toxicological information

Substances

11.1 Information on toxicological effects

a) Acute toxicity

Short term exposure

Linseed oil LD50, rat > 15000 mg/kg body weight.

Ingestion: The product is probably a mild laxative and ingestion of small amounts will not give any symptoms.

Inhalation: Not relevant. Only a risk when spraying the product. The product could in this case cause minor irritation to respiratory tracts and ethanol in the product can affect the central nervous system.

Eye contact: Could cause mild transient irritation if contact with the eyes

Skin contact: Gives no effect on the skin.

Long term exposure:

Ingestion: No data, but the product is probably laxative.

Inhalation: Only a risk when spraying the product. The product could in this case cause minor irritation to respiratory tracts and ethanol in the product can affect the central nervous system. The product consumes oxygen when drying and if insufficient ventilation this could cause a headache.

Eye contact: Repeated exposure may cause irritation to the eyes, but will probably not give any remaining effect on the eye.

Skin contact: Repeated contact might dry the skin and cause irritation or atopic eczema, but during normal use the risk is low.

b) Skin corrosion/irritation: The product i not corrosive to the skin.

c) Serious eye damage/irritation:

The product will not give serious eye damage or eye irritation.

d) Respiratory or skin sensitisation: The product is not sensitizing. There is no known sensitizing effect of linseed oil, but no data is found.

e) Germ cell mutagenicity: No known effects.

f) Carcinogenicity: No known effects.

g) Reproductive toxicity: No known effects.

h) STOT-single exposure No known effects.

i) STOT-repeated exposures No known effects.

j) Aspiration hazard (No known effects.

k) Other information -

Section 12: Ecological information

12.1 Toxicity

Acute toxicity:

Linseed oil has probably low toxicity for aquatic organisms.

Long term toxicity: The product will probably not have any adverse long term effect for the aquatic environment , but data is lacking.

Terrestrial organisms: The product is probably not harmful for terrestrial organism, but data is lacking.

Plants: The product is probably relative harmless for plants, but data is lacking.

Effects on micro-organisms living in wastewater treatment plants
The product has no known effect on microorganism living in wastewater treatment plants.

12.2 Persistence and degradability
The product is probably easily degradable, but data is lacking.

12.3 Bioaccumulative potential
The product will not bioaccumulate.

12.4 Mobility in soil
The product is water soluble but probably easily degradable and thus the mobility in soil will not be so high.

12.5 Results of PBT and vPvB assessment
The product does not contain any PBT or vPvB substance.

12.6 Other adverse effects
None known.

Section 13: Disposal consideration

13.1 Waste treatment methods	a) Emptied plastic package are sorted as hard plastic. The packaging material consists of polypropylene. The product can be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Empty dry metal canes can be stored as metal. b) There are no physical/chemical properties that may affect the waste treatment solutions. c) Larger residues should not be released to the sewage system. No special security measures concerning waste treatment methods are needed.
Waste codes (EWC)	Depends where the waste is produced, but suitable codes are 02 03 03, 20 01 28 or 08 01 14
The product is classified as hazardous waste	No.
Waste codes (EWC) for the container	Suitable codes for the packages are 15 01 04, 15 01 07, 20 01 40 or 20 01 02.
A not thoroughly cleaned container is considered dangerous waste	No
Other information	See section 8 for personal protection equipment.

Section 14: Transport information

General	Not classified as hazardous goods
14.1 UN number	-
14.2 UN Proper Shipping Name	-
14.3 Transport hazard class(es)	-
14.4 Packing group	-
14.5 Environmental hazards	-

14.6 Special precautions for users	-
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	The product is not transported in bulk, but if it will happen in the future this product is listed in Annex II of the Marpol convention. Vegetable oils floating on water is also listed as IMO category 2. Vegetable oils pollution category Y, ship type 2.

Section 15: Regulatory information

15.1 Safety. health, and environmental regulations/legislation specific for the substance or mixture
No relevant.
15.2 Chemical safety assessment
Chemical safety assessment is not made for linseed oil as it is exempted from registration according to REACH.

Section 16: Other information

This MSDS is changed in the following sections: Section 3: New CAS number and classification for the manganese salt. Update of the pigment content. Changes according to the new Annex II of the REACH regulation. PNEC included in section 8.

Hazard and Precautionary statements from section 2 and 3 in plain text (CLP):
Skin Irrit 2 = Skin corrosion/irritation, Category 2;
H315 Causes skin irritation

Risk and Safety phrases from section 2 and 3 in plain text DSD 67/548/EEC:
Xi = Irritant
R38 Irritating to skin.

VOC is determined according to ISO 11890-2. The volatile VOC will probably remain in the colour due to cross-binding reactions. This has been shown in emission measurements during painting with linseed oil paint.

Sources for data in this MSDS

- Prevent Database Chemical substances (http://kemi.prevent.se/)
- Toxnet, http://toxnet.nlm.nih.gov/
- ECHA, Guidance on information requirements and chemical safety assessment: Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system.
- ECHA data base registered substances. Titanium dioxide.
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 93 (2010) Carbon black, Titanium Dioxide and Talc. (452 p)

Other information:
Linseed oil is exempted from registration according to REACH Annex V.
See regulation EC 987/2008.

The safety data sheet is based on the REACH regulation EC 1907/2006 and the regulation EU 453/2010. Classification according to both the CLP regulation EC 1272/2008 and directives 67/548/EEC and 1999/45/EC. Names in section 3 are given either according to harmonised classified substances in Annex VI, CLP regulation EC/1272/2008, IUPAC name or other common used named chosen by the supplier. See article 18 in the CLP regulation.