



SAFETY DATA SHEET

Issue date 10 Feb. 2010

Supersedes 30 Nov. 2007

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name	Linseed oil
	This MSDS is for both raw and boiled linseed oil 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)
Use	For diluting linseed paint or surface treatment of unpainted or painted surfaces.
Manufacture/responsible import within the EEA.	Allbäck Linoljeprodukter AB
Address	Östra Balkåkravägen 18 SE-271 91 Ystad Sweden
Phone	+46-(0)411-606 02
Fax	+46-(0)411- 602 41
e-mail	allback@allbackpaint.com
Contact	Sonja Allbäck
Emergency phone	NHS Direct 0845-4647 NHS 24: 08454 242424 (24 hrs service) Information may also be obtained from www.npis.org The UK National Poisons Information Service 4123 Birmingham
Issued by	Ann Martens, Ramböll Sweden AB
Phone	+46-(0)40-10 54 47

2. HAZARDS IDENTIFICATION

Classification:

Not classified as hazardous for health or environment.

**Most important hazards:**

Risk for spontaneous combustion if 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

EC-no	CAS-no	Components name	Conc.	Classification	Comment
232-278-6	8001-26-1	Linseed oil	100 %	--	OEL
236-562-0	13434-24-7	Manganese drying agent (siccative) (only in boiled linseed oil). Manganese bis(2-ethylhexanoate)	< 0,09 mg/litre oil	Xn, R22	

Explanation of abbreviations:
CAS-no = Chemical Abstracts Service; EC-no (Einecs- or Elincs number) = European inventory of Existing Commercial Chemical of Substances or European List of Notified Chemical Substances.
Content given in either %, %weight/weight, %vol/weight, %vol/vol, mg/m3, ppb, ppm, weight%, vol%.
T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritant, E = Explosive, O = Oxidizing, F+ = Extremely flammable, F = Highly flammable, N = Dangerous for the environment, Canc. = Carcinogen, Mut = Mutagen, Rep = Toxic to Reproduction.
OEL = The product has an occupational exposure limit, PBT = The product is a PBT or vPvB substance.

Comments: Substances are declared according to directive 99/45/EG and amendments.

Linseed oil contains mainly of natural triglycerides from oleic, linoleic, cetylic acid, linolenic acid and stearic acid

For Risk phrases in full text see section 16.

4. FIRST AID MEASURES

Inhalation	Not relevant, except when spraying the product. Move to fresh air and rest if irritation occurs.
Skin contact	Wash the skin with soap or linseed oil soap and water.
Eye Contact	Remove contact lenses. Rinse the eyes for a couple of minutes. If symptoms persist, seek a physician.
Ingestion	Drink copious amount of milk or water. The product is a laxative in large amounts, but no risk for intoxication.
First aid equipment	Access to water for rinsing eyes at the working place.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Extinguish with foam, carbon dioxide, powder, water spray.
Extinguishing media which must not be used for safety reasons	Water jet.
Fire and explosion hazards	Self extinguishing at 343°C. Avoid smoke from the combustion.
Special protective equipment for fire-fighters	Wear self contained breathing apparatus for fire fighting if necessary.
Other information	Remove combustible material, Cool surfaces and containers



	exposed to fire.
ADR. If fire during transport	Switch of the motor. Keep away ignition sources. Fire extinguisher should be present during transportation.

6. ACCIDENTAL RELEASE MEASURES

Measurements for personal protection	Wash with soap or linseed oil soap and water.
Measurements for environmental protection.	The product will float on water and can be removed mechanically. Prevent discharge in the sewage system.
Methods for cleaning up.	Make embankments with sand, soil or similar and collect. Small amounts could be washed away with water. The product is not hazardous waste and is easily biodegradable in nature.
Not suitable cleaning methods.	If organic fibrous material is used for cleaning it is a fire risk and the material should be soaked in water.
Measurement when accident during transport. ADR	Switch of the motor. Keep away ignition sources. Make embankments as above.

7. HANDLING AND STORAGE

Handling	Be aware of fire hazard in porous organic materials. Immerse rags in water.
Storage	Store at room temperature. Keep away from children.
Preventing action	None
Specific use	See point 1

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Occupational Exposure Limits, EH40

EU-no	CAS-no	Substance name	OES 8 h	MEL 5 min	OES 15 min	Year
		Oil mist	3 mg/m ³	-	3 mg/m ³	1990 Swedish value
		Oil mist	5 mg/m ³	-	10 mg/m ³ (10 min.)	UK value

The UK value is only for mineral oil, but the Swedish value is for all kind of oils. It is however wise not to exceed the OES value, even if there is no mineral oil in this product.

Recommended monitoring procedures	None
Technical Measures/ Precautions	Good ventilation during painting. The product demands oxygen when drying and therefore air thoroughly.
Respiratory protection	None when painting. If polishing or grinding dried product a dust mask could be used. If occupational exposure value is surpassed use half mask with particle filter and filter A.
Hand protection	None



Material/Permeation time	
Eye protection	None
Skin protection	Normal working clothes. No special protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/State of aggregation	Liquid
Colour	Light brown
Odour	Linseed
Density	0.94 kg/l
Boiling point	349 °C
Melting point	-19°C
Flash point	222°C
Auto ignition temperature	343°C
Oxidizing properties	Oxidizing. Can self ignite in porous materials
Solubility in water	Can only emulsify and is not soluble in water.
Solubility in other solvents	The product is partially soluble in many solvents, but it is not recommended to mix with solvents.
Partition coefficient n-octanol/water	Not determined but probably >3. Linseed oil does normally consist of about 18-23 % oleic acid and this has a log Kow 7.7. The other triglycerides in linseed oil are similar.
VOC content	<38 g/l
Emission factor, Total volatile organic compounds, TVOC	64 µg/(m ² xh) after 4 week of drying time of linseed oil paint (pure linseed oil is not tested). 18 µg/(m ² xh) after 26 weeks of drying time oil paint.

10. STABILITY AND REACTIVITY

Conditions to avoid	Do not store above room temperature and not below 4°C
Material to avoid	Strong acids, bases and oxidizing agents. It reacts violently with hypochlorite.
Hazardous decomposition products	None
Stability	Stable at normal storage conditions

11. TOXICOLOGICAL INFORMATION

General information: Linseed oil is a common animal nutrition additive and has no known toxicological hazards. There are even some studies that indicate positive health effects of new pressed linseed oil. The added siccative in boiled linseed oil makes it however unsuitable to ingest.

Inhalation: Only a risk when spraying the product. The product could cause irritation if occupational exposure limit for oil mist is surpassed. The product consumes oxygen when drying and good ventilation is necessary. If inferior ventilation exists, there is a risk for headache.

Skin contact: Repeated contact might dry out the skin, but during normal use there is no hazard.

Acute toxicity: Linseed oil: >15000 mg/kg body weight.

Ingestion: Linseed oil is a laxative, but single ingestion will not give rise to any hazard.

Sensitization: Not a sensitizer.

Carcinogenic effects: None known.



Reproductive toxicity: None known.

Mutagenic effects: None known.

12. ECOLOGICAL INFORMATION

Acute toxicity for aquatic organisms (OECD): The product is not toxic to aquatic organisms.

Persistency and biodegradation: The linseed oil is easily biodegradable.

Bioaccumulation: The product will not bioaccumulate.

PBT Assessment: The product does not contain any PBT or vPvB substance.

13. DISPOSAL CONSIDERATIONS

Waste code EWC	Depends where the waste is produced, but suitable codes are 02 02 03, 20 01 28 or 08 01 13.
The product is hazardous waste	No
Package disposal	Can be sorted as plastic (polypropylene) if properly cleaned.
Suitable disposal measurements	Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

14. TRANSPORT INFORMATION

General	Not classified as hazardous goods
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15. REGULATORY INFORMATION

Labelling Symbols: No hazard label required.

Classification: Not classified as hazardous for health or environment.

Labelling package:

"Safety data sheet for professional users available upon request"

Interior and exterior minimal build woodstains (category f), VOC content <38 g/l.

EC-limit from 2010, 700 g/l.

16. OTHER INFORMATION

This MSDS is changed in the following sections:

MSDS changed in Section 1, 3, 9 and 15.

R-phrases from section 3:

Manganese bis(2-ethylhexanoate)

R22 Harmful if swallowed.

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**

- MSDS from supplier of ingredients for this product.
- IUCLID (International Uniform Chemical Information Database) Chemical Data Sheets, Data base European commission
- ESIS (European chemical Substances Information System).
- Prevent, Chemical Substances database, (<http://kemi.prevent.se/>)
- ECHA, Guidance on information requirements and chemical safety assessment: Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system. Draft ver. 2.0, 2009

Other information:

The safety data sheet is based on the REACH regulation 1907/2006/EC and other appropriate directives for classification and labelling like 67/548/EEC and 1999/45/EC.