SAFETY DATA SHEET

Issue date: 17 Sep. 2012
Supersedes: 10 Feb. 2010

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

1.1. Product identifier
Linus Wall 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 Balkäkravägen 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 < 8 g/l. Limit Phase II, from 2010 300 g/l." Eller?

"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

<table>
<thead>
<tr>
<th>EC-no</th>
<th>CAS-no</th>
<th>Name of component</th>
<th>Conc. wt/wt</th>
<th>Classification</th>
<th>Com.</th>
</tr>
</thead>
<tbody>
<tr>
<td>232-278-6</td>
<td>8001-26-1</td>
<td>Linseed oil</td>
<td>10-20 %</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>240-085-3</td>
<td>15956-58-8</td>
<td>2-Ethylhexanoic acid, manganese salt (only in boiled linseed oil)</td>
<td>0,05 mg/litre paint</td>
<td>CLP: Skin Irrit 2, H315</td>
<td>-</td>
</tr>
<tr>
<td>236-675-5</td>
<td>13463-67-7 (REACH-reg nr. 01-2119489379-17-0021 och 01-2119489379-17-0022)</td>
<td>Titanium dioxide</td>
<td>0-30 %. Varies with the colour. See below.</td>
<td>WEL</td>
<td></td>
</tr>
<tr>
<td>215-279-6</td>
<td>1317-65-3</td>
<td>Chalk (Calcium carbonate)</td>
<td>Varies with the colour (4-20 %)</td>
<td>-</td>
<td>WEL</td>
</tr>
<tr>
<td>231-791-2</td>
<td>7732-18-5</td>
<td>Water</td>
<td>25-30 %</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Different colours**

<table>
<thead>
<tr>
<th>EC-no</th>
<th>CAS-no</th>
<th>Name of component</th>
<th>Conc. wt/wt</th>
<th>Classification</th>
<th>Com.</th>
</tr>
</thead>
<tbody>
<tr>
<td>236-675-5</td>
<td>13463-67-7</td>
<td>Titanium dioxide Calcium carbonate</td>
<td>27-30 % Titanium dioxide Calcium carbonate 15-20 %</td>
<td>-</td>
<td>WEL</td>
</tr>
<tr>
<td>215-279-6</td>
<td>1317-65-3</td>
<td>White</td>
<td>-</td>
<td>-</td>
<td>WEL</td>
</tr>
<tr>
<td>215-277-5</td>
<td>1317-61-9</td>
<td>Black</td>
<td>0 % Titanium dioxide 40-45 % Iron oxide 4-5 %</td>
<td>WEL</td>
<td></td>
</tr>
</tbody>
</table>
**Section 4: First aid measures**

<table>
<thead>
<tr>
<th>4.1 Description of first aid measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Not relevant, except when spraying the product. If irritation occurs, move to fresh air and rest.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Wash the skin with water and linseed soap.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Remove contact lenses. Rinse the eyes for a couple of minutes. If symptoms persist, seek a physician.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Drink copious amounts of milk. The product is a laxative in large amounts, but no risk for intoxication. Do not provoke vomiting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.2 Most important symptoms and effects, both acute and delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
</tr>
<tr>
<td>Skin contact</td>
</tr>
<tr>
<td>Eye contact</td>
</tr>
<tr>
<td>Ingestion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.3. Indication of any immediate medical attention and special treatment needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to water for rinsing eyes at the working place.</td>
</tr>
</tbody>
</table>
Section 5: Firefighting measures

5.1 Extinguishing media
a. Recommended Extinguishing media
b. Not Recommended Extinguishing media

<table>
<thead>
<tr>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The product does not burn. Extinguish surrounding fire with foam, carbon dioxide, powder or water spray depending on what is burning</td>
</tr>
<tr>
<td>b. Foam containing substances that are harmful for the environment, i.e. Perfluoro octane sulfonate (PFOS) and Nonyl ethoxylate</td>
</tr>
</tbody>
</table>

5.2 Special hazards arising from the substance or mixture
None

5.3 Advise for firefighters
Do not inhale fumes. Wear self-contained breathing apparatus for fire fighting if necessary. Cool surfaces exposed to the fire.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>Situation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.1 For non-emergency personnel</td>
<td>Wash skin or contaminated clothes with water.</td>
</tr>
<tr>
<td>6.1.2 For emergency responders</td>
<td>None specific.</td>
</tr>
</tbody>
</table>

6.2 Environment precautions
Prevent discharge to the sewage system.

6.3 Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.1 Surrounding embankment/sealing</td>
<td>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.</td>
</tr>
<tr>
<td>6.3.2 Recommended cleaning up measures</td>
<td></td>
</tr>
<tr>
<td>6.3.3 Non-recommended measures</td>
<td></td>
</tr>
</tbody>
</table>

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 the product at room temperature. 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**

No workplace exposure values for linseed oil.

<table>
<thead>
<tr>
<th>CAS-nr</th>
<th>Substance name</th>
<th>WEL 8 h</th>
<th>WEL 5 min</th>
<th>WEL 15 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total inhalable</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>respirable</td>
<td>4 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iron oxide, fume (as Fe)</td>
<td>5 mg/m³</td>
<td></td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>1317-65-3</td>
<td>Calcium carbonate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total inhalable</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>respirable</td>
<td>4 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WEL=Workplace Exposure Limit

PNEC and DNEL/DMEL not established for linseed oil.

Values below are from REACH registration of titanium dioxide

<table>
<thead>
<tr>
<th>CAS-no</th>
<th>Substance</th>
<th>PNEC (type of environment)</th>
<th>DN(M)EL (route of exposure)</th>
<th>Exposure scenario annex</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
<td>PNEC (aqua freshwater) 0,127 mg/L</td>
<td>Workers Longtime exposure local effect DNEL Inhalation 10 mg/m³</td>
<td>Saknas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PNEC (aqua marine water) 1 mg/L</td>
<td>Consumers Longtime exposure systemic effect Oral DNEL 700 mg/kg bodyweight/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PNEC aqua (intermittent releases) 0,61 mg/L</td>
<td></td>
<td>For other DNEL/DMEL data is missing</td>
</tr>
</tbody>
</table>
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 brushing. When spraying the product, use safety goggles.

Skin protection

i) Hand protection (material, thickness, breakthrough time)

None normally necessary. If prolonged contact with the product use gloves of eg. nitrile, PVC or butyle.

ii) Other protection

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Form/State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic linseed oil.</td>
</tr>
<tr>
<td>pH</td>
<td>8.5-9</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Appr. 0 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Appr. 100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not relevant.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.3-1.7 kg/l depending on the colour.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Linseed oil will only emulsify in water. Low water solubility &lt;1 g/l. The product is partly soluble in several solvents, but it is not recommended to mix with organic solvents.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>Not determined for linseed oil in the product. Probably &gt; 3. Oleic acid that normally is a part of linseed oil with 18-</td>
</tr>
</tbody>
</table>
23 % has log Kow 7.7.

<table>
<thead>
<tr>
<th>Decomposition temperature</th>
<th>Not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>Not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>None</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>None</td>
</tr>
<tr>
<td>None of the substances are classified as oxidising. Linseed oil can however have an oxidising effect in porous organic material if the water has evaporated.</td>
<td></td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 8 g/l</td>
</tr>
</tbody>
</table>

9.2 Other information

| Emission Factor, Volatile organic compounds, TVOC | 64 μg/(m²xh) after 4 drying time of linseed oil paint (white paint), 18 μg/(m²xh) 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 and below +4 °C

10.5 Incompatible materials
Strong acids, bases and oxidizing agents.

10.6 Hazardous decomposition products
None

Section 11: Toxicological information

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.
Eye contact: Could cause mild transient irritation if contact with the eyes
Skin contact: Gives no effect on the skin

Long term exposure:
Ingestion: The product is probably a laxative, but adverse effects are not expected if occasional ingestion.
Inhalation: Not relevant except when spraying the product. The product consumes oxygen when drying and if the ventilation is insufficient during indoor painting there is a risk of headache.
Eye contact: Repeated exposure may cause irritation to the eyes, but will probably not give any remaining effect on the eye. Not eye irritating.
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 is not corrosive or irritating 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 or other ingredient in the product. No studies is however 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 waste water treatment plants.

### 12.2 Persistence and degradability
The product is probably easily degradable, but data is lacking. Studies in salt march sediments suggest however that the oil degrades.

### 12.3 Bioaccumulative potential
Linseed oil 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. 
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.

<table>
<thead>
<tr>
<th>Waste codes (EWC)</th>
<th>Depends where the waste is produced, but suitable codes are 02 03 03, 20 01 28 or 08 01 14.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product is classified as hazardous waste</td>
<td>No.</td>
</tr>
<tr>
<td>Waste codes (EWC) for the container</td>
<td>Suitable code for the packages are 20 01 39.</td>
</tr>
<tr>
<td>A not thoroughly cleaned container is considered dangerous waste</td>
<td>No</td>
</tr>
<tr>
<td>Other information</td>
<td>See section 8 for personal protection equipment.</td>
</tr>
</tbody>
</table>

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. Chemical safety assessment is done for Titanium dioxide, but Allbäck has no access to this assessment.
Section 16: Other information

This MSDS is changed in the following sections: Section 3: New CAS number and classification for the manganese salt. The MSDS is now covering only a few colours. All other colours are made directly from these with added pigment powder that is supplied separately. 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/)
- ECHA, Guidance on information requirements and chemical safety assessment: Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system.
- Consequences of linseed oil spills in salt marsh sediments.

Other information:
Linseed oil is exempted from registration according to REACH Annex V.

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.