
1. Identification of the substance/ mixture and of the company/ undertaking

Product identifier

Trade name: LEYBONOL LVO 210

Product description: Synthetic oil (ester oil with additives)

Relevant identified uses of the substance or mixture and uses advised against

Uses: Vacuum pump oil, Industrial

Recommended restrictions on use: For industrial use only.

Order number:	Number	Package Size
	L21000	0,5 liter
	L21001	1 liter
	L21002	2 liter
	L21005	5 liter
	L21020	20 liter
	L21099	208 liter

Details of the supplier of the safety data sheet

Supplier: Leybold GmbH
Bonner Strasse 498
D-50968 Cologne
Phone +49-221-347-0
Fax +49-221-347-1250
Internet www.leybold.com

E-Mail: documentation@leybold.com

Emergency phone number: +49/ (0)700 24112112 (OLC)

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273 Avoid release to the environment.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling:

EUH208 Contains: N-1-naphthylaniline. May produce an allergic reaction.

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.

3. Composition/ information on ingredients

3.2. Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
N-1-naphthylaniline	90-30-2 201-983-0 01-2119488704-27-xxxx	Acute Tox.4; H302 Skin Sens.1; H317 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0.25 - < 1

For explanation of abbreviations see section 16.

4. First aid measures

4.1. Description of first aid measures

If inhaled:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a physician or poison control centre immediately. If breathing is difficult, give oxygen. Keep respiratory tract clear.If inhaled
In case of skin contact:	Wash off with soap and plenty of water. If symptoms persist, call a physician. Take off contaminated clothing and wash before reuse.
In case of eye contact:	If eye irritation persists, consult a specialist.
If swallowed:	Rinse mouth with water. If victim is fully conscious, give a cupful of water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not give milk or alcoholic beverages. Obtain medical attention.

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

Symptoms: No information available.

Risks: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray
Alcohol-resistant foam

Carbon dioxide (CO₂)
Dry powder

Unsuitable extinguishing media: High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting: Burning produces noxious and toxic fumes.

5.3. Advice for firefighters

Special protective equipment for firefighters:

Wear full protective clothing and self-contained breathing apparatus.

Further information:

Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:

Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.

6.2. Environmental precautions

Environmental precautions:

If the product contaminates rivers and lakes or drains inform respective authorities.
The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up:

Prevent further leakage or spillage if safe to do so.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4. Reference to other sections:

Refer to protective measures listed in sections 7 and 8..

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion :

Normal measures for preventive fire protection.

Hygiene measures :

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Keep container tightly closed in a dry and well-ventilated place.

Other data:

Stable under recommended storage conditions.

7.3. Specific end uses

Specific use(s):

Lubricant

8. Exposure controls/ personal protection

8.1. Control parameters:

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Component	End Use	Exposure routes	Potential health effects	Value:
N-1-naphthylaniline	Workers	Dermal	Long-term systemic effects	0.12 mg/kg
	Workers	Inhalation	Long-term systemic effects	0.41 mg/m3
	General exposures	Ingestion	Long-term systemic effects	0.06 mg/kg
	General exposures	Dermal	Long-term systemic effects	0.06 mg/kg
	General exposures	Inhalation	Long-term systemic effects	0.1 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Component	Environmental	Value
N-1-naphthylaniline	Fresh water	Value: 0.0002 mg/l
	Marine water	Value: 0.00002 mg/l
	Fresh water sediment	Value: 0.0344 mg/kg
	Marine sediment	Value: 0.00344 mg/kg
	Soil	Value: 0.0068 mg/kg
	STP	Value: 100 mg/l

8.2. Exposure controls

Personal protective equipment

Eye protection :

Eye wash bottle with pure water.
Tightly fitting safety goggles.

Hand protection:

Polyvinyl alcohol or nitrile- butyl-rubber gloves.
Before removing gloves clean them with soap and water.

Skin and body protection:

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection:

No personal respiratory protective equipment normally required.
In case of insufficient ventilation, wear suitable respiratory equipment.

When using this product at elevated temperatures, wear a respirator with a vapour filter.

Environmental exposure controls

General advice:

If the product contaminates rivers and lakes or drains inform respective authorities., The product should not be allowed to enter drains, water courses or the soil.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	liquid
Colour:	light yellow
Odour:	No information available.
Odour Threshold:	No information available.
Flash point:	250 °C Method: Cleveland open cup ASTM D 92
Ignition temperature:	No information available.
Lower explosion limit:	No information available.
Upper explosion limit:	No information available.
Flammability (solid, gas):	No information available.
Autoignition temperature:	No information available.
pH:	Not applicable
Vapour pressure:	No information available.
Density:	0,957 g/cm ³
Water solubility:	slightly soluble
Partition coefficient: n- octanol/water:	No information available.
Solubility in other solvents:	No information available.
Viscosity, kinematic:	98,5 mm ² /s at 40 °C
Relative vapour density:	No information available.
Evaporation rate:	No information available.

9.2. Other information: Oxidising potential

10. Stability and reactivity

10.1 Reactivity: Stable under recommended storage conditions.

10.2 Chemical stability: No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions: Stable under recommended storage conditions.
No decomposition if used as directed.

10.4 Conditions to avoid:

Conditions to avoid : Heat.

10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases.

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Remarks: Not classified due to lack of data.

Acute inhalation toxicity : Remarks: Not classified due to lack of data.

Components :

N-1-naphthylaniline:

Acute oral toxicity : LD50 (Rat): 1,625 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Components:

N-1-naphthylaniline:

Species: Rabbit

Method: Draize Test

Result: No skin irritation

Serious eye damage/eye irritation

Components:

N-1-naphthylaniline:

Species: Rabbit

Method: OECD Test Guideline 405

Result: No eye irritation

Respiratory or skin sensitisation

Components:

N-1-naphthylaniline:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: May cause sensitisation by skin contact.

Result: May cause sensitisation by skin contact.

Test Type: Patch Test

Species: Human

Assessment: May cause sensitisation by skin contact.

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

N-1-naphthylaniline:

Genotoxicity in vitro :

Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

: Test Type: Chinese Hamster Ovary (CHO)

Metabolic activation: with and without metabolic activation

Result: negative

Genotoxicity in vivo :

Test Type: in vivo assay

Test species: Mouse (male)

Result: negative

Germ cell mutagenicity

Assessment :

Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity**Components:****N-1-naphthylaniline:**

Carcinogenicity

Assessment :

Animal testing did not show any carcinogenic effects.

Reproductive toxicity**Product:**

Reproductive toxicity

Assessment :

No data available

STOT - single exposure**Product:**

Remarks:

No data available

STOT - repeated exposure**Components:****N-1-naphthylaniline:**

Exposure routes:

Target Organs:

Assessment:

Oral

Liver, Kidney

May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

12. Ecological information**12.1 Toxicity****Components:****N-1-naphthylaniline:**

Toxicity to fish :

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l

Exposure time: 96 h

Test Type: semi-static test

Analytical monitoring: yes

Toxicity to daphnia and other aquatic invertebrates :

EC50 (Daphnia magna (Water flea)): 0.68 mg/l

Exposure time: 48 h

Test Type: semi-static test

Analytical monitoring: yes

Toxicity to bacteria :

EC50 (Protozoa): 2 mg/l

Exposure time: 48 h

EC50 (Bacteria): > 10,000 mg/l

Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) :

NOEC: 0.02 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Analytical monitoring: yes

12.2 Persistence and degradability

Biodegradability: Remarks: no data available

Biodegradability
N-1-naphthylaniline :
Biodegradability :

Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

12.3 Bioaccumulative potential

Bioaccumulation: Remarks: no data available

Bioaccumulation
N-1-naphthylaniline:

Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0,1 mg/l
Bioconcentration factor (BCF): 427 - 2.730

Partition coefficient: noctanol/
water :

log Pow: 4.28

12.4 Mobility in soil

Mobility: Remarks: no data available

12.5 Results of PBT and vPvB assessment:

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
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. Other adverse effects No data available

13. Disposal considerations

13.1 Waste treatment methods

Product: Dispose of wastes in an approved waste disposal facility.
The product should not be allowed to enter drains, water courses or the soil.
In accordance with local and national regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging: Dispose of as unused product.
Do not re-use empty containers.

14. Transport information

14.1 UN number Not regulated as a dangerous good

14.2 UN proper shipping name	Not regulated as a dangerous good
14.3 Transport hazard class(es)	Not regulated as a dangerous good
14.4 Packing group	Not regulated as a dangerous good
14.5 Environmental hazards	Not regulated as a dangerous good
14.6 Special precautions for user	
Remarks :	Not classified as dangerous in the meaning of transport regulations.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
	Not applicable for product as supplied.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of:
Substances of Very High
Concern for Authorisation
(Article 59). This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Regulation (EC) No 1005/2009 on
substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on
persistent organic pollutants : Not applicable

Major Accident Hazard Legislation

Seveso Directive : Directive 96/82/EC does not apply

The components of this product are reported in the following inventories:

Canadian Domestic Substances
List (DSL) : All components of this product are on the Canadian DSL

Australia Inventory of Chemical
Substances (AICS) : On the inventory, or in compliance with the inventory

New Zealand. Inventory of
Chemical Substances : On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and
New Chemical Substances
Inventory : On the inventory, or in compliance with the inventory

Korea. Korean Existing
Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines Inventory of
Chemicals and Chemical
Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing
Chemical Substances in China
(IECSC) : On the inventory, or in compliance with the inventory

Taiwan Chemical Substance
Inventory : Not in compliance with the inventory

United States TSCA Inventory : On TSCA Inventory

15.2 Chemical Safety Assessment: No information available.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H412 Harmful to aquatic life with long lasting effects.

History

Date of issue: January 08, 2010

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Notice to reader

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The information contained therein is protected by copyright and must not be reproduced or amended without the express written approval of Leybold. This document may be passed on only to the extent required by law. Any dissemination of our safety datasheets (e.g. as a document for download from the Internet) beyond this legally required extent is not permitted without express written consent.