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

1.1 Product identifier

Product name: Lub FOOD

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

Use of the Substance/Mixture: Grease

Recommended restrictions on use: Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company: NTN-SNR ROULEMENTS
1, rue des Usines - BP 2017
74000 ANNECY France

Tel: +33 (0)4 50 65 30 00
Fax: +33 (0)4 50 65 32 91

E-mail address of person responsible for the SDS: fds@ntn-snr.fr
National contact: Laboratory Service NTN-SNR Roulements

1.4 Emergency telephone number

Emergency Tel. (Office hours) +33 (0)4 50 65 97 55
Emergency Tel. (France) ORFILA (INRS) +33 (0)1 45 42 59 59
Emergency Tel. (EU): 112 (Available 24 hours a day)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

| Long-term (chronic) aquatic hazard, 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.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mineral oil.
aluminium complex soap

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Index-No. Registration number</th>
<th>Classification</th>
<th>Concentration limits M-Factor Notes</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine</td>
<td>110-25-8 203-749-3 01-2119488991-20-XXXX</td>
<td>Acute Tox.4; H332 Skin Irrit.2; H315 Eye Dam.1; H318 Aquatic Acute1; H400</td>
<td>M-Factor: 1/1</td>
<td>&gt;= 0,25 - &lt; 1</td>
</tr>
<tr>
<td>Amines, C12-14-alkyl, isoctyl phosphates</td>
<td>68187-67-7 269-119-5 01-2120286234-55-XXXX</td>
<td>Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>M-Factor: 1/1</td>
<td>&gt;= 0,25 - &lt; 1</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>128-37-0 204-881-4 01-2119555270-46-XXXX</td>
<td>Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>M-Factor: 1/1</td>
<td>&gt;= 0,1 - &lt; 0,25</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 – (REACH)

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Substances with a workplace exposure limit :

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil (petroleum)</td>
<td>8042-47-5 232-455-8 01-2119487078-27-XXXX</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>8042-47-5 232-455-8 01-2119487078-27-XXXX</td>
<td>Asp. Tox.1; H304</td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>8042-47-5 232-455-8 01-2119487078-27-XXXX</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled:
- Remove person to fresh air. If signs/symptoms continue, get medical attention.
- Keep patient warm and at rest.
- If unconscious, place in recovery position and seek medical advice.
- Keep respiratory tract clear.
- If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact:
- Remove contaminated clothing. If irritation develops, get medical attention.
- Wash off with soap and water.
- Wash clothing before reuse.
- Thoroughly clean shoes before reuse.

In case of eye contact:
- Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
- If eye irritation persists, consult a specialist.

If swallowed:
- Move the victim to fresh air.
- If unconscious, place in recovery position and seek medical advice.
- Keep respiratory tract clear.
- Do not induce vomiting without medical advice.
- Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:
- No information available.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 – (REACH)

NTN-SNR LUB FOOD
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4.3 Indication of any immediate medical attention and special treatment needed
Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting : Fire may cause evolution of: Carbon oxides

5.3 Advice for firefighters
Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions : Evacuate personnel to safe areas.
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).
Do not breathe vapours, aerosols.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions
Environmental precautions : Do not allow contact with soil, surface or ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.
6.3 Methods and material for containment and cleaning up
Methods for cleaning up: Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling:
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Wash hands and face before breaks and immediately after handling the product.
- Do not ingest.
- Do not repack.
- These safety instructions also apply to empty packaging which may still contain product residues.
- Keep container closed when not in use.

Hygiene measures:
- Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers:
- Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

Storage class (TRGS 510):
- 11, Combustible Solids

7.3 Specific end use(s)
Specific use(s):
- Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>White mineral oil (petroleum)</td>
<td>8042-47-5</td>
<td>AGW (Alveolate fraction)</td>
<td>5 mg/m3</td>
<td>DE TRGS 900</td>
</tr>
<tr>
<td>Substance name</td>
<td>End Use</td>
<td>Exposure routes</td>
<td>Potential health effects</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>White mineral oil (petroleum)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>160 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>220 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>160 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Dermal</td>
<td>Long-term systemic effects</td>
<td>220 mg/kg bw/day</td>
</tr>
<tr>
<td>(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>0.8 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>20 mg/kg bw/day</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>3.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>0.5 mg/kg</td>
</tr>
</tbody>
</table>
Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine</td>
<td>Fresh water</td>
<td>0.00043 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.0043 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.000043 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.00043 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.007 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.001 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>1.71 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>Fresh water</td>
<td>0.199 µg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.02 µg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>1.99 µg/l</td>
</tr>
<tr>
<td></td>
<td>Microbiological Activity in Sewage Treatment Systems</td>
<td>0.17 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.0996 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.00996 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.04769 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td>8.33 mg/kg</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering measures

none

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Protective index : Class 1

Remarks : For prolonged or repeated contact use protective gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type P

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : paste
Colour : yellow
Odour : characteristic
Odour Threshold : No data available

pH : No data available
Melting point/range : No data available
Boiling point/boiling range : No data available
Flash point : Not applicable
Evaporation rate : No data available
Flammability (solid, gas) : Combustible Solids
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : < 0.001 hPa (20 °C)
Relative vapour density : No data available
Density : 0.90 g/cm³ (20 °C)
Bulk density : No data available
Solubility(ies)
  Water solubility : insoluble
  Solubility in other solvents : No data available
  Partition coefficient: n-octanol/water : No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No hazards to be specially mentioned.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid
Conditions to avoid: No conditions to be specially mentioned.

10.5 Incompatible materials
Materials to avoid: No materials to be especially mentioned.

10.6 Hazardous decomposition products
No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity

Product:
Acute oral toxicity : Remarks: This information is not available.
Acute inhalation toxicity : Remarks: This information is not available.
Acute dermal toxicity : Remarks: This information is not available.

Components:
(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401
Acute inhalation toxicity : LC50 (Rat): 1,37 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: no

Amines, C12-14-alkyl, isooctyl phosphates:
Acute oral toxicity : LD50 (Rat): 1.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes
Acute dermal toxicity : LD50 (Rat): 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

2,6-di-tert-butyl-p-cresol:
Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401
Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

White mineral oil (petroleum):
Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

White mineral oil (petroleum):
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity:
LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:
Remarks: This information is not available.

Components:

(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Species: Rabbit
Assessment: Irritating to skin.
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: yes

Amines, C12-14-alkyl, isooctyl phosphates:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.
GLP: yes

2,6-di-tert-butyl-p-cresol:
Species: Rabbit
Assessment: No skin irritation
Result: No skin irritation

White mineral oil (petroleum):
Species: Rabbit
Assessment: No skin irritation  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes

**White mineral oil (petroleum):**  
Species: Rabbit  
Assessment: No skin irritation  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes

**Serious eye damage/eye irritation**

**Product:**  
Remarks: This information is not available.

**Components:**

**(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:**  
Species: Rabbit  
Assessment: Risk of serious damage to eyes.  
Method: OECD Test Guideline 405  
Result: Risk of serious damage to eyes.  
GLP: yes

**Amines, C12-14-alkyl, isooctyl phosphates:**  
Assessment: Risk of serious damage to eyes.  
Result: Risk of serious damage to eyes.

**2,6-di-tert-butyl-p-cresol:**  
Species: Rabbit  
Assessment: No eye irritation  
Method: Draize Test  
Result: No eye irritation

**White mineral oil (petroleum):**  
Species: Rabbit  
Assessment: No eye irritation  
Method: OECD Test Guideline 405  
Result: No eye irritation  
GLP: yes

**White mineral oil (petroleum):**  
Species: Rabbit  
Assessment: No eye irritation  
Method: OECD Test Guideline 405  
Result: No eye irritation
GLP: yes

Respiratory or skin sensitisation

Product:
Remarks: This information is not available.

Components:

(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Test Type: Maximisation Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: no

Amines, C12-14-alkyl, isooctyl phosphates:
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
GLP: yes

2,6-di-tert-butyl-p-cresol:
Species: Humans
Assessment: Does not cause skin sensitisation.
Result: Does not cause skin sensitisation.

White mineral oil (petroleum):
Test Type: Maximisation Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

White mineral oil (petroleum):
Test Type: Buehler Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes
Germ cell mutagenicity

**Product:**
- Genotoxicity in vitro: Remarks: No data available
- Genotoxicity in vivo: Remarks: No data available

**Components:**

(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
- Germ cell mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Amines, C12-14-alkyl, isooctyl phosphates:
- Germ cell mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

2,6-di-tert-butyl-p-cresol:
- Genotoxicity in vitro: Test Type: Ames test
  - Result: negative
  - Remarks: In vitro tests did not show mutagenic effects
- Genotoxicity in vivo: Test Type: In vivo micronucleus test
  - Result: negative
- Germ cell mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

White mineral oil (petroleum):
- Genotoxicity in vitro: Test Type: Ames test
  - Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
  - Result: negative
  - GLP: yes
- Germ cell mutagenicity- Assessment: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

**Product:**
- Remarks: No data available
Components:

(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

White mineral oil (petroleum):
Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:
Effects on fertility: Remarks: No data available
Effects on foetal development: Remarks: No data available

Components:

(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Reproductive toxicity - Assessment: No toxicity to reproduction
No effects on or via lactation

2,6-di-tert-butyl-p-cresol:
Reproductive toxicity - Assessment: No toxicity to reproduction

White mineral oil (petroleum):
Reproductive toxicity - Assessment: No toxicity to reproduction
No effects on or via lactation

White mineral oil (petroleum):
Reproductive toxicity - Assessment: No toxicity to reproduction
No effects on or via lactation

STOT - single exposure

Components:

2,6-di-tert-butyl-p-cresol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
White mineral oil (petroleum):
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

White mineral oil (petroleum):
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:
2,6-di-tert-butyl-p-cresol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

White mineral oil (petroleum):
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

White mineral oil (petroleum):
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:
Remarks: This information is not available.

Components:
White mineral oil (petroleum):
NOAEL: 1.800 mg/kg
Exposure time: 90 d

Aspiration toxicity

Product:
This information is not available.

Components:
(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
No aspiration toxicity classification

2,6-di-tert-butyl-p-cresol:
No aspiration toxicity classification

**White mineral oil (petroleum):**
No aspiration toxicity classification

**White mineral oil (petroleum):**
May be fatal if swallowed and enters airways.

**Further information**

**Product:**
Remarks: Information given is based on data on the components and the toxicology of similar products.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Product:**
Remarks: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to fish: Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates: Remarks: No data available

Toxicity to algae: Remarks: No data available

Toxicity to microorganisms: Remarks: No data available

**Components:**

**(Z)-N-methyl-N-(1-oxo-9-octadeceny1)glycine:**

Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): 3.2 - 4.6 mg/l
Exposure time: 96 h
Test Type: static test
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0.53 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae: EC50 (Desmodesmus subspicatus (green algae)): 5.1 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
### NTN-SNR LUB FOOD

**Version** 3.0  
**Revision Date:** 10.05.2019

<table>
<thead>
<tr>
<th>M-Factor (Short-term (acute) aquatic hazard)</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-Factor (Long-term (chronic) aquatic hazard)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Toxicity to microorganisms:**  
EC50 (Bacteria): 1.300 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

**Amines, C12-14-alkyl, isoctyl phosphates:**

**Toxicity to fish:**  
LC0 (Danio rerio (zebra fish)): 1 mg/l  
Exposure time: 96 h  
Test Type: static test  
GLP: yes

**Toxicity to daphnia and other aquatic invertebrates:**  
EL50 (Daphnia magna (Water flea)): 17 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

**Toxicity to algae:**  
EL50 (Pseudokirchneriella subcapitata (green algae)): 0.8 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

**2,6-di-tert-butyl-p-cresol:**

**Toxicity to fish:**  
LC50 (Danio rerio (zebra fish)): 0.57 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates:**  
EC50 (Daphnia magna (Water flea)): 0.61 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

**Toxicity to algae:**  
EC50 (Desmodesmus subspicatus (green algae)): > 0.4 mg/l  
Exposure time: 72 h  
M-Factor (Short-term (acute) aquatic hazard) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: 0.316 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Long-term (chronic) aquatic hazard) : 1

White mineral oil (petroleum):
Toxicity to fish:
LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia (water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: >= 1.000 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

White mineral oil (petroleum):
Toxicity to fish:
LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
LC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae:
NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms:
LC50 (Bacteria): > 1.000 mg/l
Exposure time: 40 h
Test Type: Growth inhibition

Toxicity to fish (Chronic toxicity):
NOEC: > 100 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

- NOEC: >= 1.000 mg/l
- Exposure time: 21 d
- Species: Daphnia magna (Water flea)
- Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

12.2 Persistence and degradability,

**Product:**

- **Biodegradability:** Remarks: No data available
- **Physico-chemical removability:** Remarks: No data available

**Components:**

1. **(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:**
   - **Biodegradability:** Test Type: aerobic
   - **Remarks:** Inoculum: activated sludge
   - **Result:** rapidly biodegradable
   - **Biodegradation:** 85 %
   - **Exposure time:** 28 d
   - **Method:** OECD Test Guideline 301B

2. **Amines, C12-14-alkyl, isoctyl phosphates:**
   - **Biodegradability:** Result: Not rapidly biodegradable
   - **Remarks:** Biodegradation: 35 %
   - **Exposure time:** 28 d
   - **GLP:** yes

3. **2,6-di-tert-butyl-p-cresol:**
   - **Biodegradability:** Test Type: aerobic
   - **Remarks:** Inoculum: activated sludge
   - **Result:** Not rapidly biodegradable
   - **Biodegradation:** 4.5 %
   - **Exposure time:** 28 d
   - **Method:** OECD Test Guideline 301C

4. **White mineral oil (petroleum):**
   - **Biodegradability:** Test Type: Primary biodegradation
   - **Remarks:** Inoculum: activated sludge
   - **Result:** Not rapidly biodegradable
   - **Biodegradation:** 31 %
   - **Exposure time:** 28 d
   - **Method:** OECD Test Guideline 301B

5. **White mineral oil (petroleum):**
12.3 Bioaccumulative potential

**Product:**
Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

**Components:**
(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:
Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.
Partition coefficient: n-octanol/water : log Pow: 3,5 - 4,2 (20 °C)

Amines, C12-14-alkyl, isoctyl phosphates:
Partition coefficient: n-octanol/water : log Pow: 1,87
Method: OECD Test Guideline 117
GLP: yes

2,6-di-tert-butyl-p-cresol:
Bioaccumulation : Bioconcentration factor (BCF): 598,4
Partition coefficient: n-octanol/water : log Pow: 5,1

White mineral oil (petroleum):
Partition coefficient: n-octanol/water : Pow: > 6

White mineral oil (petroleum):
Partition coefficient: n-octanol/water : log Pow: > 6

12.4 Mobility in soil

**Product:**
Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available
12.5 Results of PBT and vPvB assessment

**Product:**
- **Assessment:** 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.

**Components:**
- **(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine:**
  - **Assessment:** Non-classified PBT substance. Non-classified vPvB substance.

- **2,6-di-tert-butyl-p-cresol:**
  - **Assessment:** Non-classified PBT substance. Non-classified vPvB substance.

- **White mineral oil (petroleum):**
  - **Assessment:** Non-classified PBT substance. Non-classified vPvB substance.

12.6 Other adverse effects

**Product:**
- **Additional ecological information:** Harmful to aquatic life with long lasting effects.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

**Product:**
- **The product should not be allowed to enter drains, water courses or the soil.**
- **Do not dispose of with domestic refuse.**
- **Dispose of as hazardous waste in compliance with local and national regulations.**
- **Waste codes should be assigned by the user based on the application for which the product was used.**

**Contaminated packaging:**
- **Packaging that is not properly emptied must be disposed of as the unused product.**
- **Dispose of waste product or used containers according to**
The following Waste Codes are only suggestions:

SECTION 14: Transport information

14.1 UN number

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good

14.6 Special precautions for user

No special precautions required.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.
SECTION 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).

REACH - List of substances subject to authorisation (Annex XIV):
Not applicable

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals:
Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):
Not applicable

Not applicable

Water contaminating class (Germany):
WGK 1 slightly hazardous to water
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany):
Total dust:
others: 0,21 %

Inorganic substances in powdered form:
Not applicable

Inorganic substances in vapour or gaseous form:
Not applicable

Organic Substances:
portion Class 1: < 0,01 %
others: 99,79 %

Carcinogenic substances:
Not applicable

Mutagenic:
Not applicable

Toxic to reproduction:
Not applicable

Volatile organic compounds:
Directive 2010/75/EU of 24 November 2010 on industrial
emissions (integrated pollution prevention and control)
Remarks: Not applicable

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of H-statements

H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H322 : Harmful if inhaled.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-
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Further information

Classification of the mixture: Aquatic Chronic 3
Classification procedure: H412
Calculation method