Safety data sheet

According to 1907/2006/EC (REACH), 2015/830/EU

Ludwik - Ecological dishwashing liquid

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: Ludwik - Ecological dishwashing liquid

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

Relevant uses: Dishwashing detergent

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

GRUPA INCO S.A. ul. Wspólna 25

00-519 Warszawa - Mazowieckie - Polska

Phone.: +48 22 71 15 900 info.produkty@inco.pl www.inco.pl

1.4 Emergency telephone number: +48 22 7115900 (7.30-15.30)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Eye Irrit. 2: Eye irritation, Category 2, H319

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Warning



Hazard statements:

Eye Irrit. 2: H319 - Causes serious eye irritation

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand

P102: Keep out of reach of children

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

P501: Dispose of contents/ container to appropriate containers in accordance with the local municipal waste management system.

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture composed of chemical products

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

| | Identification | Chemical name/Classification | | | |
|------|--|------------------------------|---|-----------------|----------|
| CAS: | 68891-38-3 | Alcohols, C12-14(eve | n numbered), ethoxylated < 2.5 EO, sulfates, sodium salts(1) | Self-classified | |
| | 500-234-8 Non-applicable 01-2119488639-16- XXXX | Regulation 1272/2008 | Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger | | 5 - <8 % |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

| | Identification | Chemical name/Classification | | | Concentration |
|--------|--|------------------------------|---|-----------------|---------------|
| EC: | Non-applicable 931-513-6 | | amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even vs., hydroxides, inner salts(1) | Self-classified | |
| | Non-applicable 01-2119513359-38- XXXX | Regulation 1272/2008 | Aquatic Chronic 3: H412; Eye Dam. 1: H318 - Danger | (I) | 1 - <3 % |
| CAS: | 110615-47-9 | Lauryl glucoside(1) | | Self-classified | |
| Index: | 600-975-8 Non-applicable 01-2119489418-23- XXXX | Regulation 1272/2008 | Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger | <u> </u> | 1 - <3 % |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

| Identification | Specific concentration limit |
|---|---|
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8 | % (w/w) >=10: Eye Dam. 1 - H318 5<= % (w/w) <10: Eye Irrit. 2 - H319 |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts CAS: Non-applicable EC: 931-513-6 | % (w/w) >=10: Eye Dam. 1 - H318 4<= % (w/w) <10: Eye Irrit. 2 - H319 |

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

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SECTION 5: FIREFIGHTING MEASURES (continued)

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace

There are no occupational exposure limits for the substances contained in the product

DNEL (Workers):

| | | Short exposure | | Long exposure | |
|---|------------|----------------|----------------|----------------------|----------------|
| Identification | | Systemic | Local | Systemic | Local |
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| CAS: 68891-38-3 | Dermal | Non-applicable | Non-applicable | 2750 mg/kg | Non-applicable |
| EC: 500-234-8 | Inhalation | Non-applicable | Non-applicable | 175 mg/m³ | Non-applicable |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| CAS: Non-applicable | Dermal | Non-applicable | Non-applicable | 12,5 mg/kg | Non-applicable |
| EC: 931-513-6 | Inhalation | Non-applicable | Non-applicable | 44 mg/m ³ | Non-applicable |

DNEL (General population):

| | | Short exposure | | Long exposure | |
|---|------------|----------------|----------------|----------------------|----------------|
| Identification | | Systemic | Local | Systemic | Local |
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts | Oral | Non-applicable | Non-applicable | 15 mg/kg | Non-applicable |
| CAS: 68891-38-3 | Dermal | Non-applicable | Non-applicable | 1650 mg/kg | Non-applicable |
| EC: 500-234-8 | Inhalation | Non-applicable | Non-applicable | 52 mg/m ³ | Non-applicable |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts | Oral | Non-applicable | Non-applicable | 7,5 mg/kg | Non-applicable |
| CAS: Non-applicable | Dermal | Non-applicable | Non-applicable | 7,5 mg/kg | Non-applicable |
| EC: 931-513-6 | Inhalation | Non-applicable | Non-applicable | Non-applicable | Non-applicable |

PNEC:

| Identification | | | | |
|---|--------------|----------------|-------------------------|--------------|
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts | STP | 10000 mg/L | Fresh water | 0,24 mg/L |
| CAS: 68891-38-3 | Soil | 0,946 mg/kg | Marine water | 0,024 mg/L |
| EC: 500-234-8 | Intermittent | 0,071 mg/L | Sediment (Fresh water) | 5,45 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 0,545 mg/kg |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts | STP | 3000 mg/L | Fresh water | 0,0135 mg/L |
| CAS: Non-applicable | Soil | 0,8 mg/kg | Marine water | 0,00135 mg/L |
| EC: 931-513-6 | Intermittent | Non-applicable | Sediment (Fresh water) | 1 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 0,1 mg/kg |

8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

C.- Specific protection for the hands

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|---------------------------|--|-----------|--------------|--|
| Mandatory hand protection | Protective gloves against minor risks | CATI | | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2003+A1:2009 and EN ISO 374-1:2016 |

[&]quot;As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application"

D.- Ocular and facial protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|---------------------------|---|-----------|---------------------------------|---|
| Mandatory face protection | Panoramic glasses against splash/projections. | CATII | EN 166:2001 EN ISO 4007:2018 | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

E.- Body protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|-----------|----------------------|-----------|-------------------|---|
| | Work clothing | CATI | | Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994. |
| | Anti-slip work shoes | CATII | EN ISO 20347:2012 | Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007 |

F.- Additional emergency measures

| Emergency measure | Standards | Emergency measure | Standards |
|-------------------|---|-------------------|--|
| Emergency shower | ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011 | Eyewash stations | DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 |

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply): 0 % weight
V.O.C. density at 20 °C: 0 kg/m³ (0 g/L)
Average carbon number: Non-applicable
Average molecular weight: Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C: Liquid Appearance: Fluid

Colour: Characteristic
Odour: Characteristic

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Odour threshold: Non-applicable *

Volatility:

Boiling point at atmospheric pressure: 100 °C Vapour pressure at 20 °C: 2350 Pa

Vapour pressure at 50 °C: 12381,01 Pa (12,38 kPa)

Evaporation rate at 20 °C: Non-applicable *

Product description:

Density at 20 °C: ca.1030 kg/m³

Relative density at 20 °C: ca.1,03

Dynamic viscosity at 20 °C:

Kinematic viscosity at 20 °C:

Kinematic viscosity at 40 °C:

Non-applicable *

Non-applicable *

Non-applicable *

Non-applicable *

pH: 5 - 7

Vapour density at 20 °C: Non-applicable * Partition coefficient n-octanol/water 20 °C: Non-applicable * Solubility in water at 20 °C: Non-applicable * Solubility properties: Non-applicable * Decomposition temperature: Non-applicable * Melting point/freezing point: Non-applicable * Non-applicable * Explosive properties: Oxidising properties: Non-applicable *

Flammability:

Flash Point: Non Flammable (>60 °C)

Flammability (solid, gas):

Autoignition temperature:

Lower flammability limit:

Upper flammability limit:

Non-applicable *

Non-applicable *

Explosive:

Lower explosive limit: Non-applicable *
Upper explosive limit: Non-applicable *

9.2 Other information:

Surface tension at 20 °C:

Refraction index:

Non-applicable *

Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:





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SECTION 10: STABILITY AND REACTIVITY (continued)

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|----------------|----------------|
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Not applicable | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

- A- Ingestion (acute effect):
 - Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
 - Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
- B- Inhalation (acute effect):
 - Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
 - Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
 - Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for skin contact. For more information see section 3.
 - Contact with the eyes: Produces eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
 - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
 - IARC: Non-applicable
 - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:
 - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
 - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

- G- Specific target organ toxicity (STOT)-repeated exposure:
 - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

The skin and/or eye classification of this product was derived using bridging principles (such as dilution, interpolation within one hazard category or substantially similar mixtures; with or without expert judgement) following Article 9(3) and Article 9(4) of Regulation (EC) No 1272/2008.

DetNet logging number:

Specific toxicology information on the substances:

| Identification | Acut | te toxicity | Genus |
|---|-----------------|----------------|-------|
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts | LD50 oral | 2430 mg/kg | Rat |
| CAS: Non-applicable | LD50 dermal | Non-applicable | |
| EC: 931-513-6 | LC50 inhalation | Non-applicable | |
| Lauryl glucoside | LD50 oral | 5500 mg/kg | Rat |
| CAS: 110615-47-9 | LD50 dermal | Non-applicable | |
| EC: 600-975-8 | LC50 inhalation | Non-applicable | |

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

| Identification | Acute toxicity | | Species | Genus |
|---|----------------|----------------------|-------------------------|------------|
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts | LC50 | 7.1 mg/L (96 h) | Danio rerio | Fish |
| CAS: 68891-38-3 | EC50 | 7.4 mg/L (48 h) | Daphnia magna | Crustacean |
| EC: 500-234-8 | EC50 | 27 mg/L (72 h) | Scenedesmus subspicatus | Algae |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-(C12-18(even numbered) acyl) derivs., hydroxides, inner salts | LC50 | 10 - 100 mg/L (96 h) | | Fish |
| CAS: Non-applicable | EC50 | 10 - 100 mg/L | | Crustacean |
| EC: 931-513-6 | EC50 | 10 - 100 mg/L | | Algae |
| Lauryl glucoside | LC50 | 2.95 mg/L (96 h) | Brachydanio rerio | Fish |
| CAS: 110615-47-9 | EC50 | 14 mg/L (48 h) | Daphnia magna | Crustacean |
| EC: 600-975-8 | EC50 | 12 mg/L (72 h) | Scenedesmus subspicatus | Algae |

12.2 Persistence and degradability:

| Identification | Degradability | | Biodegradability | |
|---|---------------|----------------|------------------|-----------|
| Alcohols, C12-14(even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts | BOD5 | Non-applicable | Concentration | 10.5 mg/L |
| CAS: 68891-38-3 | COD | Non-applicable | Period | 28 days |
| EC: 500-234-8 | BOD5/COD | Non-applicable | % Biodegradable | 100 % |
| Lauryl glucoside | BOD5 | Non-applicable | Concentration | 2 mg/L |
| CAS: 110615-47-9 | COD | Non-applicable | Period | 28 days |
| EC: 600-975-8 | BOD5/COD | Non-applicable | % Biodegradable | 88 % |

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|------------------|-----------------------|----------------|------------|----------------|
| Lauryl glucoside | Koc | 50 | Henry | 2E-8 Pa·m³/mol |
| CAS: 110615-47-9 | Conclusion | Very High | Dry soil | No |
| EC: 600-975-8 | Surface tension | Non-applicable | Moist soil | No |

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|-----------|--|---|
| 20 01 29* | detergents containing hazardous substances | Dangerous |

Type of waste (Regulation (EU) No 1357/2014):

HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2019 and RID 2019:

| 14.1 | UN number: | Non-applicable |
|--------------|-----------------------------|----------------|
| 14.2 | UN proper shipping name: | Non-applicable |
| 14.3 | Transport hazard class(es): | Non-applicable |
| | Labels: | Non-applicable |
| 14.4 | Packing group: | Non-applicable |
| 1 <i>1</i> E | Environmental bazarde | No |

14.5 Environmental hazards: No

14.6 Special precautions for user

Special regulations:
Non-applicable
Tunnel restriction code:
Physico-Chemical properties:
Limited quantities:
Non-applicable
Non-applicable
Transport in bulk according
to Annex II of Marpol and the

IBC Code:
Transport of dangerous goods by sea:

With regard to IMDG 38-16:

14.1 UN number: Non-applicable
 14.2 UN proper shipping name: Non-applicable
 14.3 Transport hazard class(es): Non-applicable
 Labels: Non-applicable
 14.4 Packing group: Non-applicable

14.5 Environmental hazards: No

14.6 Special precautions for user

Special regulations: Non-applicable EmS Codes:

Physico-Chemical properties: see section 9
Limited quantities: Non-applicable
Segregation group: Non-applicable

14.7 Transport in bulk according Non-applicable

to Annex II of Marpol and the IBC Code:

Transport of dangerous goods by air:

With regard to IATA/ICAO 2020:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number: Non-applicable
 14.2 UN proper shipping name: Non-applicable
 14.3 Transport hazard class(es): Non-applicable
 Labels: Non-applicable
 14.4 Packing group: Non-applicable

14.5 Environmental hazards: No

14.6 Special precautions for user

Physico-Chemical properties: see section 9 **14.7 Transport in bulk according** Non-applicable

to Annex II of Marpol and the

IBC Code:

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Regulation (EC) No 648/2004 on detergents:

In accordance with this regulation the product complies with the following:

The tensoactives contained in this mixture comply with the biodegradibility criteria stipulated in Regulation (EC) $n^{\circ}648/2004$ on detergents. The information to prove this is available to the relevant authorities of the Member States and will be shown to them by direct request or the request of a detergent manufacturer.

Seveso III:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

- Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products
- Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents
- Commission Regulation (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII
- Commission Regulation (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation)

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

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RUPA

Safety data sheet

According to 1907/2006/EC (REACH), 2015/830/EU

Ludwik - Ecological dishwashing liquid

SECTION 16: OTHER INFORMATION (continued)

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H319: Causes serious eve irritation

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects

Eye Dam. 1: H318 - Causes serious eye damage Skin Irrit. 2: H315 - Causes skin irritation

Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://echa.europa.eu http://eur-lex.europa.eu

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code IATA: International Air Transport Association ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor LD50: Lethal Dose 50 LC50: Lethal Concentration 50 EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET
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