

## Ludwik - washing-up liquid colourless odorless

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

- 1.1 Product identifier:** Ludwik – washing-up liquid colourless odorless
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Dishwashing liquid and liquid for cleaning hard surface, in food and pharmaceutical industry.  
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) n° 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.  
Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Hazard statements:**  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects  
**Precautionary statements:**  
P102: Keep out of reach of children  
P501: Dispose of contents / container to the waste according to local municipal waste management system.  
**Supplementary information:**  
EUH208: Contains reaction mass 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3-one. May produce an allergic reaction
- 2.3 Other hazards:**  
Non-applicable

### 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) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 68439-57-6 EC: 270-407-8 Index: Non-applicable REACH: 01-2119513401-57-XXXX	<b>Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts</b> Regulation 1272/2008 Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	Self-classified  <b>5 - &lt;8 %</b>
CAS: 68155-07-7 EC: 931-329-6 Index: Non-applicable REACH: 01-2119490100-53-XXXX	<b>Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl)</b> Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	Self-classified   <b>1 - &lt;3 %</b>
CAS: 68891-38-3 EC: 500-234-8 Index: Non-applicable REACH: 01-2119488639-16-XXXX	<b>Alcohols, C12-14 (even numbered),ethoxylated &lt; 2.5 EO, sulfates, sodium salts</b> Regulation 1272/2008 Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	Self-classified  <b>1 - &lt;3 %</b>

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continue)**

Identification	Chemical name/Classification	Concentration
CAS: 55965-84-9 EC: Non-applicable Index: 613-167-00-5 REACH: Non-applicable	<b>Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</b> Regulation 1272/2008 Acute Tox. 3: H301+H311+H331; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	ATP CLP00   <b>&lt;0,0015 %</b>

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

**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 is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms 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 shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as 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, manipulation and use. In the case of inflammation as a result of improper manipulation, 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 tap water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

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 individual respiratory equipment. 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. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, 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:**

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**SECTION 6: ACCIDENTAL RELEASE MEASURES (continue)**

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 spilled product (See section 8). Evacuate the area and keep out those who do not have protection.

**6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**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, manipulation 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

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 40 °C

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.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

There are no environmental limits for the substances contained in the product

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 68439-57-6	Dermal	Non-applicable	Non-applicable	2158,33 mg/kg	Non-applicable
EC: 270-407-8	Inhalation	Non-applicable	Non-applicable	152,22 mg/m <sup>3</sup>	Non-applicable

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	4,16 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	73,4 mg/m <sup>3</sup>	Non-applicable
Alcohols, C12-14 (even numbered),ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2750 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	175 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	Oral	Non-applicable	Non-applicable	12,95 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1295 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	45,04 mg/m <sup>3</sup>	Non-applicable
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	Oral	Non-applicable	Non-applicable	6,25 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	21,73 mg/m <sup>3</sup>	Non-applicable
Alcohols, C12-14 (even numbered),ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	Oral	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1650 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	52 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification				
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	STP	4 mg/L	Fresh water	0,042 mg/L
	Soil	0,0061 mg/kg	Marine water	0,0042 mg/L
	Intermittent	0,042 mg/L	Sediment (Fresh water)	2,025 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,2025 mg/kg
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	STP	830 mg/L	Fresh water	0,007 mg/L
	Soil	0,0189 mg/kg	Marine water	0,0007 mg/L
	Intermittent	0,024 mg/L	Sediment (Fresh water)	0,0424 mg/kg
Alcohols, C12-14 (even numbered),ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
	STP	10000 mg/L	Fresh water	0,24 mg/L
	Soil	0,946 mg/kg	Marine water	0,024 mg/L
	Intermittent	0,071 mg/L	Sediment (Fresh water)	5,45 mg/kg
Oral	Non-applicable	Sediment (Marine water)	0,545 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 Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection 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 professional exposure limits are exceeded.



C.- Specific protection for the hands

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves		EN 420:2003+A1:2009	Replace the gloves at any sign of deterioration.



D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing		EN ISO 13688:2013	For professional use only.
	Anti-slip work shoes		EN ISO 20347:2012 EN ISO 20344:2011	None

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

**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/m <sup>3</sup> (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
Color:	<input type="checkbox"/> Colourless
Odor:	Odourless

**Volatility:**

Boiling point at atmospheric pressure:	100 °C
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\*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 (continue)**

Vapour pressure at 20 °C: 2350 Pa  
 Vapour pressure at 50 °C: 12381 Pa (12 kPa)  
 Evaporation rate at 20 °C: Non-applicable \*

**Product description:**

Density at 20 °C: 1030 - 1040 kg/m<sup>3</sup>  
 Relative density at 20 °C: 1,04  
 Dynamic viscosity at 20 °C: Non-applicable \*  
 Kinematic viscosity at 20 °C: Non-applicable \*  
 Kinematic viscosity at 40 °C: Non-applicable \*  
 Concentration: Non-applicable \*  
 pH: 5,3 - 5,9  
 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: Highly water-soluble  
 Decomposition temperature: Non-applicable \*  
 Melting point/freezing point: Non-applicable \*

**Flammability:**

Flash Point: Non Flammable (>60 °C)  
 Autoignition temperature: Non-applicable \*  
 Lower flammability limit: Non-applicable \*  
 Upper flammability limit: Non-applicable \*

**9.2 Other information:**

Surface tension at 20 °C: Non-applicable \*  
 Refraction index: 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 if the following technical instructions storage of chemicals. 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:

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	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Avoid direct impact	Not applicable	Not applicable

**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 (CO<sub>2</sub>), carbon monoxide and other organic compounds.

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**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 recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion:

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains 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 contains substances classified as dangerous for consumption. For more information see section 3.

B- Inhalation:

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. 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.

C- Contact with the skin and the eyes:

- 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: 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.

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.
- 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 sensibilizing effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensibilizing effects. For more information see section 3.

F- Specific target organ toxicity (STOT)-time 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 this effect. For more information see section 3.

**Other information:**

The mixture is not irritant to skin - the assessment with use of the bridge methods, comparison with reference formulations for which the tests were performed.

The mixture is not irritant to eyes - the assessment with use of the bridge methods, comparison with reference formulations for which the tests were performed.

Classification number: DetNet/770.

The mixture has pH ca. 5,5, which as result might demonstrate other effect than substances mentioned in section 3.

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts	LD50 oral	2290 mg/kg	Rat
CAS: 68439-57-6	LD50 dermal	6300 mg/kg	Rabbit
EC: 270-407-8	LC50 inhalation	Non-applicable	

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**SECTION 11: TOXICOLOGICAL INFORMATION (continue)**

Identification	Acute toxicity		Genus
Alcohols, C12-14 (even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	LD50 oral	4100 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) CAS: 55965-84-9 EC: Non-applicable	LD50 oral	100 mg/kg	Rat
	LD50 dermal	300 mg/kg	Rat
	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		Specie	Genus
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	LC50	4,2 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	4,53 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	5,2 mg/L (72 h)	Skeletonema costatum	Algae
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	LC50	2,4 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	3,2 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	23,4 mg/L (72 h)	Scenedesmus subspicatus	Algae
Alcohols, C12-14 (even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	LC50	10 - 100 mg/L (96 h)		Fish
	EC50	10 - 100 mg/L (48 h)		Crustacean
	EC50	10 - 100 mg/L (72 h)		Algae
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) CAS: 55965-84-9 EC: Non-applicable	LC50	0,1 - 1 mg/L (96 h)		Fish
	EC50	0,1 - 1 mg/L		Crustacean
	EC50	0,1 - 1 mg/L		Algae

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	BOD5	Non-applicable	Concentration	20 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	96 %
Alcohols, C12-14 (even numbered), ethoxylated < 2.5 EO, sulfates, sodium salts CAS: 68891-38-3 EC: 500-234-8	BOD5	Non-applicable	Concentration	10,5 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	BCF	71
	Pow Log	-1,3
	Potential	Moderate
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	BCF	44
	Pow Log	1,35
	Potential	Moderate

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts CAS: 68439-57-6 EC: 270-407-8	Koc	1,6	Henry	6,7E-2 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes

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**SECTION 12: ECOLOGICAL INFORMATION (continue)**

Identification	Absorption/desorption		Volatility	
Amides, C8-C18 (even numbered) and C18-unsatd.,n,n-(hydroxyethyl) CAS: 68155-07-7 EC: 931-329-6	Koc	243	Henry	3,7E-7 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	No
	Surface tension	27700 N/m (24,5 °C)	Moist soil	No

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
20 01 29*	Detergents containing dangerous substances	Dangerous

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

HP14 Ecotoxic

**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 recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°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**

This product is not regulated for transport (ADR/RID,IMDG,IATA)

**SECTION 15: REGULATORY INFORMATION**

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

Regulation (EC) No 528/2012: contains a preservative to protect the initial properties of the treated article. Contains Bronopol (INN), Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1).

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

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

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (excluded for the product type 3, 7, 9, 10)

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

**Regulation (EC) n°648/2004 on detergents:**

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

The tensoactives contained in this mixture comply with the biodegradability criteria stipulated in Regulation (EC) n°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.

**Ludwik - washing-up liquid colourless odorless****SECTION 15: REGULATORY INFORMATION (continue)****Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):**

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 data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, 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:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous security card which concerns the ways of managing risks. :**

Section: 2,16

**Texts of the legislative phrases mentioned in section 2:**

H412: Harmful to aquatic life with long lasting effects

**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) n° 1272/2008:**

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

Aquatic Acute 1: H400 - Very toxic to aquatic life

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects

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

Eye Dam. 1: H318 - Causes serious eye damage

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage

Skin Irrit. 2: H315 - Causes skin irritation

Skin Sens. 1: H317 - May cause an allergic skin reaction

**Advice related to training:**

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

**Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

- CONTINUED ON NEXT PAGE -

**Ludwik - washing-up liquid colourless odorless****SECTION 16: OTHER INFORMATION (continue)****Classification method:**

Aquatic Chronic 3: the calculation method  
Eye Irrit 2/Eye Dam.1: the bridge methods  
Skin Irrit 2: the bridge methods

**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
- CL50: 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 -