SAFETY DATA SHEET

LanoPro Multi Cleaner EF-101

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

 Date issued
 12.12.2019

 Revision date
 31.07.2023

1.1. Product identifier

Product name LanoPro Multi Cleaner EF-101

Formula Formulated product.

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

Use of the substance / mixture Cleaning/washing agent.

Uses advised against It is not recommended for other uses than the areas mentioned above.

Industrial use Yes

Professional use Yes

Consumer use No

1.3. Details of the supplier of the safety data sheet

Company name
LanoPro Production AS

Postal address
Smedveien 7

Postcode
1344

City
Haslum
Country
Norway

Telephone number
+47 40 00 15 14

Website
www.lanopro.com

1.4. Emergency telephone number

Emergency telephone Telephone number: +47 22 59 13 00

Description: Toxic Information

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS] Eye Irrit. 2; H319

Substance / mixture hazardous properties

Causes serious eye irritation.

2.2. Label elements

Hazard pictograms (CLP)



Signal word Warning

Hazard statements 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. P280 Wear protective gloves / protective clothing / eye protection / face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. P313 Get medical advice / attention.

Other label information (CLP) Contents:

Alcoholethoxylate Potassium hydroxide 2-(2-Butoxyethoxy)ethanol

2.3. Other hazards

PBT / vPvB This product is not classified as PBT or vPvB.

Health effect Causes serious eye irritation.

SECTION 3: Composition / information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents	Notes
C9-11 Alcohol ethoxylat	CAS No.: 68439-46-3	Eye Irrit. 2; H319	5 - 10 %	
Alkyl glucoside	CAS No.: 54549-24-5	Eye Dam. 1; H318	< 2,5 %	
	EC No.: 259-217-6			

	REACH Reg. No.: 01-2119492545-29			
Tetrapotassium pyrophosphate	CAS No.: 7320-34-5 EC No.: 230-785-7 REACH Reg. No.: 01-2119489369-18-xxxx	Eye Irrit. 2; H319	1 - 5 %	
2-(2-Butoxyethoxy) ethanol	CAS No.: 112-34-5 EC No.: 203-961-6 Index No.: 603-096-00-8 REACH Reg. No.: 01-2119475104-44-xxxx	Eye Irrit. 2;H319	1 - 5 %	
Potassium hydroxide	CAS No.: 1310-58-3 EC No.: 215-181-3 Index No.: 019-002-00-8 REACH Reg. No.: 01-2119487136-33-xxxx	Skin Corr. 1A; H314 Acute Tox. 4; H302 Met. Corr. 1; H290 CLP classification, notes: SCL: Eye Irrit. 2; H319: 0,5 % \leq C $<$ 2 % Skin Corr. 1A; H314: C \geq 5 % Skin Corr. 1B; H314: 2 % \leq C $<$ 5 % Skin Irrit. 2; H315: 0,5 % \leq C $<$ 2 % ATE oral: 333 mg/kg.	< 0,2 %	
Substance comments	For a complete list	t of risk phrases, look at sect	tion 16.	

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Immediately remove the patient from further exposure. General first aid if necessary. If in doubt, get medical advice. General first aid in the form of sumptomatic treatment should always be given if there is uncertainty regarding specific treatment.
Inhalation	General first aid, rest, warmth and fresh air.
Skin contact	Remove contaminated clothing immediately and rinse skin with rinsing cream. After this, apply a fatty cream.
Eye contact	Promptly rinse eyes with plenty of water for at least 15 minutes. Remove contact lenses and open eyes wide apart. Immediatley consult a doctor. Transport to a physician. Keep on flushing during transport.
Ingestion	DO NOT INDUCE VOMITING! Drink a few glasses of water or milk. Consult a physician for specific advice.
Recommended personal protective equipment for first aid responders	First aid personnel should take account of their own protection, and use the recommended personal protective equipment where there is a risk of exposure (see section 8).

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

Acute symptoms and effects	Inhalation: Gas or vapour may irritate respiatory system.

Skin contact: Defatting, drying and cracking of skin.

Eye contact: Causes serious eye irritation.

Ingestion: Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

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

Medical treatment	Treat symptomatically.
Other information	When seeking medical advice, bring the safety data sheet or label.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Improper extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	This product is not flammable.
Hazardous combustion products	In case of fire, toxic gases (CO, CO2, NOx) may be formed. Phosphorus.

5.3. Advice for firefighters

Personal protective equipment	General: Evacuate all personnel, use protective equipment for fire-fighting. Use
	self-contained breathing apparatus when the product is involved in fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Wear protective clothing as described in Section 8 of this safety data sheet.
For emergency responders	Wear protective equipment as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautionary	Avoid discharge into drains, water courses or onto the ground. Contain spillages
measures	with sand, earth or any suitable adsorbent material.

6.3. Methods and material for containment and cleaning up

Clean up	Absorb in vermiculite, dry sand or earth and place into containers. Flush area with
	water. "For larger spills, trenches should be dug or other suitable measures taken
	to contain the material from spreading. If material can be pumped out of the
	trenches, the collected material should be stored in an appropriate container."

6.4. Reference to other sections

Other instructions	See section 8 and 13 for further information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling For personal protection see section 8.

Protective safety measures

Advice on general occupational hygiene

Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage Store above freezing.

7.3. Specific end use(s)

Specific use(s) For degreasing and cleaning.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
2-(2-Butoxyethoxy) ethanol	CAS No.: 112-34-5	Limit value (8 h) : 10 ppm Limit value (8 h) : 68 mg/ m3 Exposure limit letter Letter code: E	
Potassium hydroxide	CAS No.: 1310-58-3	Peak limitation value Peak limitation value: 2 mg/m³	,
Control parameters comment	2011-12-06-1358. Explanation of the not E = The substance has T = Ceiling value is an	ulations): Norwegian regulatio ations: s an EU workplace exposure li instantaneous value which ind emical in the breathing zone th	mit dicates the maximum

DNEL / PNEC

Substance	Alkyl glucoside
DNEL	Group: Consumer Route of exposure: Long term (repeated) - Inhalation - Systemic effect Value: 124 mg/m3
	Group: Consumer Route of exposure: Long term (repeated) - Oral - Systemic effect Value: 35,7 mg/kg/bw/day
	Group: Worker Route of exposure: Long term (repeated) - Inhalation - Systemic effect Value: 420 mg/m3

Group: Consumer

Route of exposure: Long term (repeated) - Dermal - Systemic effect

Value: 357000 mg/kg/bw/day

Group: Worker

Route of exposure: Long term (repeated) - Dermal - Systemic effect

Value: 595000mg/kg/bw/day

PNEC Route of exposure: Sewage treatment plant STP

Value: 100 mg/l

Route of exposure: Soil Value: 0,654 mg/kg dryweight

Route of exposure: Saltwater sediments

Value: 0,072 mg/kg dryweight

Route of exposure: Freshwater sediments

Value: 0,722 mg/kg dryweight

Route of exposure: Freshwater

Value: 0,176 mg/l

Route of exposure: Saltwater

Value: 0,018 mg/l

Substance Tetrapotassium pyrophosphate

DNEL Group: Consumer

Route of exposure: Long term (repeated) - Inhalation - Systemic effect

Value: 0,68 mg/l

Group: Industrial

Route of exposure: Long term (repeated) - Inhalation - Systemic effect

Value: 2,79 mg/m3

PNEC Route of exposure: Freshwater

Value: 0,5 mg/l

Route of exposure: Saltwater

Value: 0,005 mg/l

Substance 2-(2-Butoxyethoxy)ethanol

DNEL Group: Worker

Route of exposure: Long term (repeated) - Inhalation - Systemic effect

Value: 10 ppm

Group: Consumer

Route of exposure: Long term (repeated) - Dermal - Systemic effect

Value: 10 mg/kg bodyweight/day

Group: Worker

Route of exposure: Long term (repeated) - Dermal - Systemic effect

Value: 20 mg/kg bodyweight/day

Group: Consumer

Route of exposure: Long term (repeated) - Inhalation - Local effect

Value: 34 mg/m3

Group: Consumer

Route of exposure: Long term (repeated) - Inhalation - Local effect

Value: 34 mg/m3

Group: Consumer

Route of exposure: Long term (repeated) - Oral - Systemic effect

Value: 1,3 mg/kg bodyweight/day

Group: Worker

Route of exposure: Short term (acute) - Inhalation - Local effect

Value: 101,2 mg/m3

Group: Worker

Route of exposure: Long term (repeated) - Inhalation - Local effect

Value: 10 ppm

PNEC Route of exposure: Soil

Value: 0,4 mg/l

Route of exposure: Water

Value: 1 mg/l

Route of exposure: Sewage treatment plant STP

Value: 200 mg/l

Route of exposure: Sediment

Value: 4 mg/l

Substance Potassium hydroxide

DNEL Group: Professional

Route of exposure: Long-term inhalation (local)

Value: 1 mg/m³

Group: Consumer

Route of exposure: Long-term inhalation (local)

Value: 1 mg/m³

Summary of risk management measures, human

If this product contains components with occupational exposure limits, monitoring of personnel, work atmosphere, or biological parameters may be necessary to determine the effectiveness of exhaust ventilation or other protective measures, and/or the need for personal respiratory protection. Reference is made to European Standard EN 689 regarding methods for assessing exposure by inhalation of chemicals, and national, guiding documents for methods of determining hazardous substances.

8.2. Exposure controls

Safety signs





Precautionary measures to prevent exposure

Instruction on measures to prevent exposure

All handling to take place in well-ventilated area. Personal protecting equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Provide eyewash, quick drench. Avoid contact with eyes and prolonged skin contact. Avoid eating, drinking and smoking when using the product.

Eye / face protection

Suitable eye protection Use CE-labeled safety goggles or face shield. EN 166

Hand protection

Suitable gloves type	Material : Nitrile rubber Glove thickness : 0,4 mm Breakthrough time: : > 480 min
	Material: Fluorinated rubber Glove thickness: 0,4 mm Breakthrough time:: > 480 min Use CE-labeled gloves according to EN 374.
Hand protection, comments	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer

Skin protection

Skin protection remark

Overall suit shall be used where the work involves smudging to such an extent that ordinary working clothes do not protect the skin against contact with the product. Use CE-labeled protection equipment.

Respiratory protection

Recommended type of equipment	In case of inadequate ventilation: Use respiratory equipment with combination	
	filter, type A/P2.	
	Use CE-labeled protecting equipment. Use EN 140 for half face mask, EN 136 for	
	full face mask. Particle filter: EN 143, Gasfilter: EN 14387.	

Appropriate environmental exposure control

Environmental exposure controls Prevent discha

Prevent discharge into sewage, watercourses, or the ground.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Light yellow.
Odour	Mild.
Odour limit	Comments: No data available.
pH	Status: In delivery state

Value: ~ 11

Status: In aqueous solution

Value: ~ 10,9 Method: 20%

Melting point / melting range Value: 0 °C

Boiling point / boiling range $Value: \sim 100 \, ^{\circ}C$ Flash point $Value: > 100 \, ^{\circ}C$

Evaporation rate Comments: No data available.

Flammability Not relevant.

Lower explosion limit with unit of

measurement

Upper explosion limit with units of

measurement

Comments: No data available.

Comments: No data available.

Vapour pressure Comments: No data available.

Vapour density Comments: No data available.

Relative density Value: ~ 1000 kg/m3

Solubility Comments: Soluble in water.

Partition coefficient: n-octanol/

water

Comments: Not relevant.

Auto-ignition temperature Comments: No data available.

Decomposition temperature Comments: No data available.

Viscosity Comments: Not determined.

Explosive properties Not explosive.

Oxidising properties Non oxidizing.

9.2. Other information

Other physical and chemical properties

Physical and chemical properties No data available.

9.2.2. Other safety characteristics

Comments No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with acids.

10.5. Incompatible materials

Materials to avoid Not known.

10.6. Hazardous decomposition products

Hazardous decomposition products

Hazardous decomposition products are not expected to form under normal

storage. See section 5.2.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Substance	C9-11 Alcohol ethoxylat
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 5000 mg/kg Animal test species: Rat Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit
Substance	Alkyl glucoside
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg Animal test species: Rat Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit
Substance	Tetrapotassium pyrophosphate
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg Animal test species: Mouse

Type of toxicity: Acute Effect tested: LD50

Route of exposure: Dermal **Value:** > 7940 mg/kg Animal test species: Rabbit

Substance

2-(2-Butoxyethoxy)ethanol

Acute toxicity

Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral **Value:** > 2000 mg/kg Animal test species: Rat

Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: 2410 mg/kg Animal test species: Mouse

Comments: OECD 401

Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: 2764 mg/kg

Animal test species: Rabbit Test reference: OECD 402

Type of toxicity: Acute Effect tested: LC50

Route of exposure: Inhalation.

Duration: 2 h Value: > 29 ppm Animal test species: Rat Test reference: OECD 403

Substance

Potassium hydroxide

Acute toxicity Type of toxicity: Acute

Effect tested: LD50 Route of exposure: Oral Value: 333 mg/kg Animal test species: rat

Other information regarding health hazards

Assessment of acute toxicity,

classification

Assessment of skin corrosion / irritation, classification

Assessment of eye damage or irritation, classification

Assessment of respiratory sensitisation, classification The classification criteria are not met based on available data.

The classification criteria are not met based on available data.

Causes eye irritation.

The classification criteria are not met based on available data.

Assessment of skin sensitisation, classification	The classification criteria are not met based on available data.
Assessment of germ cell mutagenicity, classification	The classification criteria are not met based on available data.
Assessment of carcinogenicity, classification	The classification criteria are not met based on available data.
Assessment of reproductive toxicity, classification	The classification criteria are not met based on available data.
Assessment of specific target organ toxicity - single exposure, classification	The classification criteria are not met based on available data.
Assessment of specific target organ toxicity - repeated exposure, classification	The classification criteria are not met based on available data.
Assessment of aspiration hazard, classification	The classification criteria are not met based on available data.

Symptoms of exposure

In case of ingestion	See section 4.2.
In case of skin contact	See section 4.2.
In case of inhalation	See section 4.2.
In case of eye contact	See section 4.2.

11.2 Other information

Endocrine disruption	Contains no substances with endocrine disrupting properties.
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SECTION 12: Ecological information

12.1. Toxicity

Substance	C9-11 Alcohol ethoxylat
Aquatic toxicity, fish	Value: > 1 - 10 mg/l Test duration: 96 h Species: Oncorhynchus mykiss Method: LC50 Test reference: OECD Test-retningslinje 203
Substance	Alkyl glucoside
Aquatic toxicity, fish	Value: > 100 mg/l Test duration: 96 h Species: Oncorhynchus mykiss Method: LC50
Substance	Tetrapotassium pyrophosphate
Aquatic toxicity, fish	Value: > 100 mg/l Test duration: 96 h Species: Onchorhynchus mykiss Method: LC50

Substance	2-(2-Butoxyethoxy)ethanol
Aquatic toxicity, fish	Value: > 100 mg/l Species: Leusicscus idus Method: LC50
Substance	Potassium hydroxide
Aquatic toxicity, fish	Value: 80 mg/l Effect dose concentration: LC50 Test duration: 96 h Species: Gambusia affinis Method: Static test
	Value: 165 mg/l Effect dose concentration: LC50 Exposure time: 24 hour(s) Species: Poecilia reticulata
Substance	C9-11 Alcohol ethoxylat
Aquatic toxicity, algae	Value: > 1 - 10 mg/l Test duration: 72 h Species: Skeletonema costatum Method: EC50
Substance	Alkyl glucoside
Aquatic toxicity, algae	Value: > 100 mg/l Test duration: 72 h Species: Scenedesmus quadricauda Method: EC50
Substance	2-(2-Butoxyethoxy)ethanol
Aquatic toxicity, algae	Value: > 100 mg/l Test duration: 96 h Species: Scenedesmus quadric Method: EC50
Substance	C9-11 Alcohol ethoxylat
Aquatic toxicity, crustacean	Value: > 1 - 10 mg/l Test duration: 48 h Species: Daphnia magna Method: EC50
Substance	Alkyl glucoside
Aquatic toxicity, crustacean	Value: > 100 mg/l Test duration: 48 h Species: Daphnia magna Method: EC50
Substance	Tetrapotassium pyrophosphate
Aquatic toxicity, crustacean	Value: > 100 mg/l Test duration: 48 h Species: daphnia magna Method: LC50 Test reference: OECD 202

Substance 2-(2-Butoxyethoxy)ethanol Aquatic toxicity, crustacean **Value:** > 100 mg/l Test duration: 48 h Species: Daphnia magna Method: EC50 Substance Potassium hydroxide Toxicity to bacteria Value: 22 mg/l Effect dose concentration: EC50 Exposure time: 15 minute(s) Species: Photobacterium phosphoreum **Ecotoxicity** The product is not expected to be toxic to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability description/evaluation

The product contains only readily biodegradable substances. The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

12.3. Bioaccumulative potential

Bioaccumulation, comments	Will not bio-accumulate.
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12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

Substance	C9-11 Alcohol ethoxylat
PBT assessment results	Not Classified as PBT/vPvB by current EU criteria.
Substance	2-(2-Butoxyethoxy)ethanol
PBT assessment results	This substance is not classified as PBT or vPvB.
Substance	Potassium hydroxide
PBT assessment results	This substance is not classified as PBT or vPvB.
Results of PBT and vPvB assessment	Not Classified as PBT/vPvB by current EU criteria.

12.6. Endocrine disrupting properties

Endocrine disrupting properties	The product does not contain any substances with endocrine disrupting
	properties.

12.7. Other adverse effects

Additional ecological information No other harmful effects are expected.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical

Appropriate methods of disposal for the contaminated packaging

EWC waste code

EWC waste code

EWC waste code

EWC waste code

Other information

Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point. Do not discharge into drains, watercourses, or the ground.

Empty containers should be taken to local recycling, recovery, or waste disposal facilities.

EWC waste code: 070604 other organicsolvents, washing liquids and mother liquors
Classified as hazardous waste: Yes

Other information

Dispose of in accordance with local authority requierments.

SECTION 14: Transport information

Dangerous goods No

14.1. UN number

Comments Not relevant.

14.2. UN proper shipping name

Comments Not relevant.

14.3. Transport hazard class(es)

Comments Not relevant.

14.4. Packing group

Comments Not relevant.

14.5. Environmental hazards

IMDG Marine pollutant No

14.6. Special precautions for user

Special safety precautions for user No data recorded.

14.7. Maritime transport in bulk according to IMO instruments

ADR/RID Other information

Tunnel restriction code Not relevant.

SECTION 15: Regulatory information

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

Restriction of chemicals according to Annex XVII (REACH)

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):

Conditions of restriction for the fol-lowing entries should be considered:

Substance	Number on list 3 2-(2-Butoxyethoxy)ethanol
Restriction of chemicals according to Annex XVII (REACH)	Nr. 55 on list.
References (laws/regulations)	Norwegian regulation on classification and labeling of dangerous chemicals. Regulation on classification, labeling and packaging of substances and mixtures (CLP). Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II. Administrative norms for pollution of the atmosphere, the latest edition, from Norwegian labour inspection authority. Norwegian regulations on waste, no. 930/2004. Dangerous Goods regulations.

15.2. Chemical safety assessment

Chemical safety assessment	No
performed	

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H319 Causes serious eye irritation.
CLP classification, comments	Classification procedure: calculation method.
Abbreviations and acronyms used	PBT: Persistent, Bioaccumulative and Toxic. vPvB: very Persistent and very Bioaccumulative. LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%.
Information added, deleted or revised	REVISIONS: 15.03.2021: Updated according to Commission Regulation (EU) 2020/878 08.11.2022: General revision. 31.07.2023: General revision. Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
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