

SAFETY DATA SHEET

Ruderens

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

1.1. Product identifier

Trade name

Ruderens

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

Relevant identified uses of the substance or mixture

None known.

Use descriptors (REACH)

Sectors of use	Description
LCS "PW"	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
LCS "C"	Consumer uses: Private households (= general public = consumers)
Product category	Description
PC 35	Washing and Cleaning Products (including solvent based products)
Process category	Description
PROC 11	Non industrial spraying
Environmental release category	Description
ERC 8a	Wide dispersive indoor use of processing aids in open systems

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Pureno A/S

Gefionsvej 20
3400 Hillerød
Denmark
+45 70 260 267

Contact person

Lars Skaarup

E-mail

ls@pureno.dk

Revision

07/10/2024

SDS Version

3.0

Date of previous version

22/04/2024 (3.0)

1.4. Emergency telephone number

Contact the poison hotline: +45 82 12 12 12 (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP).

2.1. Classification of the substance or mixture

Aerosol 3; H229, Pressurised container: May burst if heated.

2.2. Label elements

Hazard pictogram(s)

Not applicable.

Signal word

Warning

Hazard statement(s)

Pressurised container: May burst if heated. (H229)

Precautionary statement(s)

General

Keep out of reach of children. (P102)

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Do not pierce or burn, even after use. (P251)

Response

-

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412)

Disposal

-

Hazardous substances

None known.

Additional labelling

Not applicable.

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2-butoxyethanol	CAS No.: 111-76-2 EC No.: 203-905-0 REACH: 01-2119475108-36-XXXX Index No.: 603-014-00-0	5-10%	Acute Tox. 4, H302 (ATE: 1200.00 mg/kg) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 3, H331	[1]
carbon dioxide	CAS No.: 124-38-9 EC No.: 204-696-9 REACH: Index No.:	5-10%	Press. Gas (Liq.) , H280	[1]
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	CAS No.: 68891-38-3 EC No.: 500-234-8 REACH: 01-2119488639-16 Index No.:	<0.25%	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412	[19]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Not applicable.

5.2. Special hazards arising from the substance or mixture

Pressurised container. In a fire or if heated, a pressure increase will occur and the container may burst.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the chemical emergency services on 72 85 20 00 (24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. ▼ Personal precautions, protective equipment and emergency procedures

No specific requirements.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not pierce or burn, even after use.
 Avoid contact during pregnancy and while nursing.
 Smoking, drinking and consumption of food is not allowed in the work area.
 See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage material

Always store in containers of the same material as the original container.

Storage conditions

> 0°C

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-butoxyethanol

Long term exposure limit (8 hours) (mg/m³): 98
 Long term exposure limit (8 hours) (ppm): 20
 Short term exposure limit (15 minutes) (mg/m³): 246
 Short term exposure limit (15 minutes) (ppm): 50

Annotations:

E = Substance has an EC limit.
 H = The substance can be absorbed through the skin.

carbon dioxide

Long term exposure limit (8 hours) (mg/m³): 9000
 Long term exposure limit (8 hours) (ppm): 5000
 Short term exposure limit (15 minutes) (mg/m³): 18000
 Short term exposure limit (15 minutes) (ppm): 10000

Annotations:

E = Substance has an EC limit.

Statutory order 291 on exposure limits for substances and mixtures (19/03/2024)

DNEL

2-butoxyethanol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Inhalation	59 mg/m ³
Long term – Systemic effects - Workers	Inhalation	98 mg/m ³
Short term – Local effects - General population	Inhalation	147 mg/m ³
Short term – Local effects - Workers	Inhalation	246 mg/m ³
Short term – Systemic effects - General population	Inhalation	426 mg/m ³
Short term – Systemic effects - Workers	Inhalation	1091 mg/m ³
Long term – Systemic effects - General population	Oral	6.3 mg/kg bw/day
Short term – Systemic effects - General population	Oral	26.7 mg/kg bw/day

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Dermal	79 µg/cm ²
Long term – Local effects - Workers	Dermal	132 µg/cm ²
Long term – Systemic effects - General population	Dermal	1650 mg/kg bw/day

Long term – Systemic effects - General population	Dermal	1650 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	2750 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	2750 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	52 mg/m ³
Long term – Systemic effects - General population	Inhalation	52 mg/m ³
Long term – Systemic effects - Workers	Inhalation	175 mg/m ³
Long term – Systemic effects - Workers	Inhalation	175 mg/m ³
Long term – Systemic effects - General population	Oral	15 mg/kg bw/day
Long term – Systemic effects - General population	Oral	15 mg/kg bw/day

PNEC

2-butoxyethanol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		8.8 mg/L
Freshwater sediment		34.6 mg/kg
Intermittent release (freshwater)		26.4 mg/L
Marine water		880 µg/L
Marine water sediment		3.46 mg/kg
Predators		20 mg/kg
Sewage treatment plant		463 mg/L
Soil		2.33 mg/kg

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		240 µg/L
Freshwater sediment		916.8 µg/kg
Intermittent release (freshwater)		71 µg/L
Marine water		24 µg/L
Marine water sediment		91.7 µg/kg
Sewage treatment plant		10 g/L
Soil		7.5 mg/kg

8.2. ▼ Exposure controls

Apply general control to prevent unnecessary exposure

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

▼ Exposure limits

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only CE marked protective equipment.

Respiratory Equipment

Work situation	Type	Class	Colour	Standards
When developing	Normally, personal			

Work situation	Type	Class	Colour	Standards
vapour, use respiratory protection with approved filter	respiratory equipment is not necessary			
Skin protection				
Recommended	Type/Category	Standards		
No special when used as intended	-	-		
Hand protection				
Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
No special when used as intended	-	-	-	
Eye protection				
Type	Standards			
No special when used as intended.	-			

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Aerosol

Colour

Clear

Odour / Odour threshold

Pleasant

▼ pH

No relevant or available data due to the nature of the product.

▼ Density (g/cm³)

No relevant or available data due to the nature of the product.

▼ Kinematic viscosity

No relevant or available data due to the nature of the product.

▼ Particle characteristics

No relevant or available data due to the nature of the product.

Phase changes

▼ Melting point/Freezing point (°C)

No relevant or available data due to the nature of the product.

Softening point/range (°C)

Does not apply to aerosols.

▼ Boiling point (°C)

No relevant or available data due to the nature of the product.

▼ Vapour pressure

No relevant or available data due to the nature of the product.

▼ Relative vapour density

No relevant or available data due to the nature of the product.

▼ Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

Does not apply to aerosols.

▼ Flammability (°C)

No relevant or available data due to the nature of the product.

▼ Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)

No relevant or available data due to the nature of the product.

Solubility

Solubility in water

Completely soluble

▼ n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

▼ Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

9.2. Other information

Other physical and chemical parameters

No data available.

▼ Oxidizing properties

No relevant or available data due to the nature of the product.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. ▼ Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	2-butoxyethanol
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	1746 mg/kg ·

Product/substance	2-butoxyethanol
Species:	Guinea pig
Route of exposure:	Oral
Test:	LD50
Result:	1414 mg/kg ·

Product/substance	2-butoxyethanol
Species:	Guinea pig
Route of exposure:	Dermal
Test:	LD50
Result:	>2000 mg/kg ·

Product/substance	2-butoxyethanol
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	>3,1 mg/l ·

Product/substance	carbon dioxide
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	470000 ppm 0,5 h ·

Product/substance	Alcohols, C12-14, ethoxylated, sulfates, sodium salts
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Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: >5000 mg/kg ·

Product/substance Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: >5000 mg/kg ·

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects

None known.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

2-butoxyethanol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance 2-butoxyethanol
 Species: Fish
 Duration: 96 hours
 Test: LC50
 Result: 1474 mg/l ·

Product/substance 2-butoxyethanol
 Species: Daphnia
 Duration: 48 hours
 Test: EC50
 Result: 1550mg/l ·

Product/substance 2-butoxyethanol
 Species: Algae
 Duration: 72 hours
 Test: EC50
 Result: 1840 /lmg ·

Product/substance 2-butoxyethanol
 Species: Crustacean

Duration: 16 hours
 Test: EC0
 Result: 700 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Fish
 Duration: No data available.
 Test: LC50
 Result: >10-100 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Algae
 Duration: No data available.
 Test: EC50
 Result: >100 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Crustacean
 Duration: No data available.
 Test: EC0
 Result: >100 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Daphnia
 Duration: No data available.
 Test: EC50
 Result: >10-100 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Daphnia
 Duration: No data available.
 Test: NOEC
 Result: >0,1-1 mg/l ·

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Species: Fish
 Duration: No data available.
 Test: NOEC
 Result: >0,1-1 mg/l ·

12.2. Persistence and degradability

Product/substance: 2-butoxyethanol
 Conclusion: Readily biodegradable

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Conclusion: Readily biodegradable

12.3. Bioaccumulative potential

Product/substance: 2-butoxyethanol
 LogKow: 0,8100
 Conclusion: No potential for bioaccumulation

Product/substance: carbon dioxide
 LogKow: 0,8300
 Conclusion: No potential for bioaccumulation

Product/substance: Alcohols, C12-14, ethoxylated, sulfates, sodium salts
 Conclusion: No potential for bioaccumulation

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation

to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste. (*)

HP 6 - Acute toxicity

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code

16 05 04* Gases in pressure containers (including halons) containing dangerous substances

Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informatio n:
ADR	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2 Classification code: 5A 	-	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information
IMDG	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2 Classification code: 5A 	-	No	Limited quantities: 1 L EmS: F-D S-U See below for additional information
IATA	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2 Classification code: 5A 	-	No	See below for additional information

* Packing group

** Environmental hazards

▼ Additional information

This product is within scope of the regulations of transport of dangerous goods.

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or

accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

Not applicable.

Additional information

Not applicable.

Sources

The Danish Working Environment Authority's executive order no. 1049 of 30 May 2021 on young people's work. Based on Council Directive 94/33 / EC of 22 June 1994 on the protection of young people at work.

Pregnant workers and workers who are breastfeeding (AT Guide A.1.8-6, amended 2020).

Executive Order no. 247 of 14 March 2014 on interior design, etc. of aerosols, as amended by EO No. 301 of 27 March 2014, EO no. 478 of 25 May 2016 and EO 1336 of 29 November 2017.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H280, Contains gas under pressure; may explode if heated.

H302, Harmful if swallowed.

H315, Causes skin irritation.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H331, Toxic if inhaled.

H412, Harmful to aquatic life with long lasting effects.

The full text of identified uses as mentioned in section 1

LCS "PW" = Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

LCS "C" = Consumer uses: Private households (= general public = consumers)

PROC 11 = Non industrial spraying

PC 35 = Washing and Cleaning Products (including solvent based products)

ERC 8a = Wide dispersive indoor use of processing aids in open systems

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

The safety data sheet is validated by

Lisbet Tetsche

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: DK-en