

Safety Data Sheet

ECO RESTORE



Safety Data Sheet dated 10/3/2023, version 6.0

This version cancels and substitutes any previous version

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

1.1. Product identifier

Mixture identification:

Trade name: ECO RESTORE

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

Recommended use:

Biodegradable Condenser Cleaner

1.3. Details of the supplier of the safety data sheet

Company:

ERRECOM SPA

Via Industriale, 14

Corzano (BS) Italy

Tel. +39 030/9719096

Competent person responsible for the safety data sheet:

lab@errecom.it

1.4. Emergency telephone number

+39 02-6610-1029 Poison Control Center Niguarda Ca' Granda - Milano - ITALY

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)



Danger, Eye Dam. 1, Causes serious eye damage.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H318 Causes serious eye damage.

Precautionary statements:

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.

P310 Immediately call a POISON CENTER.

Special Provisions:

None

Contains

Sulfonic acids, C14-17-sec-alkane, sodium salts

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

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No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$
Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
$\geq 2.5\%$ - $< 5\%$	Sulfonic acids, C14-17-sec-alkane, sodium salts	CAS: 97489-15-1 EC: 307-055-2 REACH No.: 01-21194899 24-20-XXXX	3.1/4/Oral Acute Tox. 4 H302 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 4.1/C3 Aquatic Chronic 3 H412
$\geq 1\%$ - $< 2.5\%$	2-(2-butoxyethoxy)etha nol	Index 603-096-00-8 number: CAS: 112-34-5 EC: 203-961-6 REACH No.: 01-21194751 04-44-XXXX	3.3/2 Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

No information available.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

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- None in particular.
- 5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
- 5.3. Advice for firefighters
Use suitable breathing apparatus.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures
For non emergency personnel:
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.
For emergency responders:
Wear personal protection equipment.
- 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
Wash with plenty of water.
- 6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes.
Advice on general occupational hygiene:
Wash hands after use
Contaminated clothing should be changed before entering eating areas.
- 7.2. Conditions for safe storage, including any incompatibilities
Store the product between + 0 °C / + 32 °F and + 40 °C / + 104 °F.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
- 7.3. Specific end use(s)
Information not available.

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
2-(2-butoxyethoxy)ethanol - CAS: 112-34-5
EU - TWA(8h): 67.5 mg/m³, 10 ppm - STEL: 101.2 mg/m³, 15 ppm
ACGIH - TWA(8h): 10 ppm - Notes: (IFV) - Hematologic, liver and kidney eff
- DNEL Exposure Limit Values
Sulfonic acids, C14-17-sec-alkane, sodium salts - CAS: 97489-15-1
Worker Industry: 2.8 mg/cm² - Consumer: 2.8 mg/cm² - Exposure: Human Dermal -
Frequency: Short Term (acute)

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Worker Industry: 5 mg/kg - Consumer: 3.57 mg/kg - Exposure: Human Dermal -
Frequency: Long Term, systemic effects
Worker Industry: 35 mg/m³ - Consumer: 12.4 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term, systemic effects
Worker Industry: 2.8 mg/cm² - Consumer: 2.8 mg/cm² - Exposure: Human Dermal -
Frequency: Long Term, local effects
Consumer: 7.1 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

Worker Industry: 67.5 mg/m³ - Consumer: 40.5 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term, local effects
Worker Industry: 101.2 mg/m³ - Consumer: 60.7 mg/m³ - Exposure: Human Inhalation -
Frequency: Short Term, local effects
Worker Industry: 83 mg/kg - Consumer: 50 mg/kg - Exposure: Human Dermal -
Frequency: Long Term, systemic effects
Worker Industry: 67.5 mg/m³ - Consumer: 40.5 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term, systemic effects
Consumer: 5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Sulfonic acids, C14-17-sec-alkane, sodium salts - CAS: 97489-15-1

Target: Fresh Water - Value: 0.04 mg/L
Target: Marine water - Value: 0.04 mg/L
Target: Aquatic, periodic release - Value: 0.06 mg/L
Target: Freshwater sediments - Value: 9.4 mg/kg
Target: Marine water sediments - Value: 0.94 mg/kg
Target: Soil (agricultural) - Value: 9.4 mg/kg
Target: Microorganisms in sewage treatments - Value: 600 mg/L
Target: Oral - Value: 53.3 mg/kg

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

Target: Fresh Water - Value: 1.1 mg/L
Target: Marine water - Value: 0.11 mg/L
Target: Freshwater sediments - Value: 4.4 mg/kg
Target: Marine water sediments - Value: 0.44 mg/kg
Target: Soil (agricultural) - Value: 0.32 mg/kg
Target: Secondary poisoning - Value: 56 mg/kg
Target: Microorganisms in sewage treatments - Value: 200 mg/L

8.2. Exposure controls

Eye protection:

Use close safety visors, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

One-time gloves.
Suitable material:
CR (polychloroprene, chloroprene rubber).
NBR (nitrile rubber).
NR (natural rubber, natural latex).
Material thickness: minimum 0.12 mm.
Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

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None
Environmental exposure controls:
None
Appropriate engineering controls:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid	--	--
Colour:	Colourless	--	--
Odour:	characteristic	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	11.4	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	total	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	1.02 g/mL (+20°C / +68°F)	ASTM-D4052	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information
No other relevant information

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Information not available.

- 10.6. Hazardous decomposition products
No data available

SECTION 11: Toxicological information

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

Toxicological information of the product:

- a) acute toxicity
Not classified
Based on available data, the classification criteria are not met
- b) skin corrosion/irritation
Not classified
Based on available data, the classification criteria are not met
- c) serious eye damage/irritation
The product is classified: Eye Dam. 1 H318
- d) respiratory or skin sensitisation
Not classified
Based on available data, the classification criteria are not met
- e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
- f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
- g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
- h) STOT-single exposure
Not classified
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure
Not classified
Based on available data, the classification criteria are not met
- j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

Sulfonic acids, C14-17-sec-alkane, sodium salts - CAS: 97489-15-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 500 mg/kg - Source: OECD 401 - Notes:
>500 - 2000 mg/kg

Test: LD50 - Route: Skin - Species: Mouse > 2000 mg/kg - Notes: femal mouse

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2410 mg/kg - Source: OCSE 401

Test: LD50 - Route: Skin - Species: Rabbit = 2764 mg/kg - Source: OCSE 402

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

LD50 (RAT) ORAL: 6560 MG/KG

LD50 (RABBIT) SKIN: 4120 MG/KG

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Not classified for environmental hazards

Based on available data, the classification criteria are not met

Sulfonic acids, C14-17-sec-alkane, sodium salts

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 1 mg/L - Duration h: 96 - Notes: 1-10 mg/L - Species: Danio rerio - OECD 203

Endpoint: EC50 - Species: Daphnia 9.81 mg/L - Duration h: 48 - Notes: Species: Daphnia magna - OECD 202

Endpoint: EC50 - Species: Algae > 61 mg/L - Duration h: 72 - Notes: Species: Desmodesmus subspicatus - OECD 201

Endpoint: NOEC - Species: Bacteria 600 mg/L - Notes: Species: Pseudomonas putida - DIN 38412 T.8

Endpoint: NOEC - Species: Fish 0.85 mg/L - Duration h: 672 - Notes: Species: Oncorhynchus mykiss - OECD TG 204

Endpoint: NOEC - Species: Daphnia 0.36 mg/L - Duration h: 528 - Notes: Species: Daphnia magna

Endpoint: NOEC - Species: earthworms 470 mg/kg - Duration h: 1344 - Notes: Species: Eisenia fetida - OECD 222

2-(2-butoxyethoxy)ethanol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1300 mg/L - Duration h: 96 - Notes: Species: Lepomis macrochirus

Endpoint: EC50 - Species: Daphnia > 100 mg/L - Duration h: 48 - Notes: Species: Daphnia magna

Endpoint: EC50 - Species: Algae > 100 mg/L - Duration h: 96 - Notes: Species: Selenastrum capricornutum

12.2. Persistence and degradability

Sulfonic acids, C14-17-sec-alkane, sodium salts - CAS: 97489-15-1

Biodegradability: Readily biodegradable - Test: OECD 301 B - Duration: 28 d - %: 78

Biodegradability: Readily biodegradable - Test: OECD 301 E - Duration: 28 d - %: 89

Biodegradability: Readily biodegradable - Test: OECD 303 - Duration: 34 d - %: 96.2

2-(2-butoxyethoxy)ethanol - CAS: 112-34-5

Biodegradability: Completely biodegradable - Test: OECD 302 B - Duration: 28 d - %: 100

Biodegradability: Readily biodegradable - Test: OECD 301 C - Duration: 28 d - %: 89 - Notes: 89-93%

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

- 14.1. UN number or ID number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No
- 14.6. Special precautions for user
N.A.
- 14.7. Maritime transport in bulk according to IMO instruments
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 2020/878
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

Restriction 55

Restriction 75

Where applicable, refer to the following regulatory provisions :

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Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification
SECTION 3: Composition/information on ingredients
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 9: Physical and chemical properties
SECTION 11: Toxicological information
SECTION 12: Ecological information
SECTION 15: Regulatory information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Eye Dam. 1, H318	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

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It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.