

Safety Data Sheet

COMPRESSOR+



Safety Data Sheet dated 25/2/2021, version 5.0

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: COMPRESSOR+

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

Recommended use:

Reconditioning additive for compressor replacement or A/C system flushing

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)

 Warning, Skin Sens. 1, May cause an allergic skin reaction.

 Warning, Muta. 2, Suspected of causing genetic defects.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 Wear protective gloves and eye protection.

Special Provisions:

None

Contains

2,3-epoxypropyl neodecanoate

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

None

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2.3. Other hazards

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 |
|-------------------------------|---------------------------------|---|---|
| $\geq 5\%$ - $< 7\%$ | 2,3-epoxypropyl neodecanoate | CAS: 26761-45-5 EC: 247-979-2 REACH No.: 01-21194315 97-33-XXXX | 3.4.2/1 Skin Sens. 1 H317 3.5/2 Muta. 2 H341 4.1/C2 Aquatic Chronic 2 H411 |
| $\geq 0.5\%$ - $< 1\%$ | butan-1-ol | Index number: 603-004-00-6 CAS: 71-36-3 EC: 200-751-6 REACH No.: 01-21194846 30-38-XXXX | 2.6/3 Flam. Liq. 3 H226 3.1/4/Oral Acute Tox. 4 H302 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 3.8/3 STOT SE 3 H335 3.8/3 STOT SE 3 H336 |
| $\geq 0.01\%$ - $< 0.05\%$ | sodium hydroxide | Index number: 011-002-00-6 CAS: 1310-73-2 EC: 215-185-5 REACH No.: 01-21194578 92-27-XXXX | 2.16/1 Met. Corr. 1 H290 3.2/1A Skin Corr. 1A H314 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: C $\geq 5\%$: Skin Corr. 1A H314 2% \leq C $< 5\%$: Skin Corr. 1B H314 0,5% \leq C $< 2\%$: Skin Irrit. 2 H315 0,5% \leq C $< 2\%$: 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.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Wash contaminated clothing before using them.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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 spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide.
Extinguishing media which must not be used for safety reasons:
High pressure water jet.
- 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
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.
- 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, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Advice on general occupational hygiene:
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.
Keep away from food, drink and feed.

Incompatible materials:
Keep away from oxidants.
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

butan-1-ol - CAS: 71-36-3
ACGIH - TWA(8h): 20 ppm - Notes: Eye and URT irr
sodium hydroxide - CAS: 1310-73-2
ACGIH - STEL: Ceiling 2 mg/m³ - Notes: URT, eye, and skin irr

DNEL Exposure Limit Values

2,3-epoxypropyl neodecanoate - CAS: 26761-45-5
Worker Professional: 1.4 mg/kg - Consumer: 0.7 mg/kg - Exposure: Human Dermal -
Frequency: Long Term, systemic effects
Worker Professional: 1.965 mg/m³ - Consumer: 1 mg/m³ - Exposure: Human Inhalation
- Frequency: Long Term, systemic effects
Consumer: 1.1 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic
effects

butan-1-ol - CAS: 71-36-3
Worker Professional: 310 mg/m³ - Consumer: 55 mg/m³ - Exposure: Human Inhalation
- Frequency: Long Term (repeated)
Consumer: 3125 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated)

sodium hydroxide - CAS: 1310-73-2
Worker Professional: 1 mg/m³ - Consumer: 1 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term (repeated)

PNEC Exposure Limit Values

2,3-epoxypropyl neodecanoate - CAS: 26761-45-5
Target: Fresh Water - Value: 0.0035 mg/l
Target: Marine water - Value: 0.35 µg/l
Target: Microorganisms in sewage treatments - Value: 50 mg/l
Target: Occasional emission - Value: 0.035 mg/l

butan-1-ol - CAS: 71-36-3
Target: Fresh Water - Value: 0.08 mg/l
Target: Aquatic, periodic release - Value: 2.25 mg/l
Target: Marine water - Value: 0.008 mg/l
Target: Freshwater sediments - Value: 0.324 mg/kg
Target: Microorganisms in sewage treatments - Value: 2476 mg/l
Target: Marine water sediments - Value: 0.032 mg/kg
Target: Soil (agricultural) - Value: 0.01 mg/kg

8.2. Exposure controls

Eye protection:

Protective airtight goggles (ref. Standard EN 166).

Protection for skin:

Not needed for normal use.

Protection for hands:

work gloves resistant to penetration (ref. standard EN 374).

One-time gloves.

Suitable material:

NBR (nitrile rubber).

PVC (polyvinyl chloride).

NR (natural rubber, natural latex).

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Material thickness: 0.4 mm minimum.

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 necessary for normal use.

In the case of vapour formation use a respirator with an approved filter.

Mask with filter "A", brown colour

Thermal Hazards:

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: | amber | -- | -- |
| 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: | 90 ° C | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| pH: | N.A. | -- | -- |
| Kinematic viscosity: | > 20,5 mm ² /sec (40 °C) | -- | -- |
| Solubility in water: | N.A. | -- | -- |
| Solubility in oil: | total | -- | -- |
| Partition coefficient n-octanol/water (log value): | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Density and/or relative density: | 0.996 g/mL (+20°C/+68°F) | -- | -- |
| 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
Store away from direct sunlight.
- 10.5. Incompatible materials
Strong oxidizing agents.
- 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
Not classified
Based on available data, the classification criteria are not met
- d) respiratory or skin sensitisation
The product is classified: Skin Sens. 1 H317
- e) germ cell mutagenicity
The product is classified: Muta. 2 H341
- 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:

2,3-epoxypropyl neodecanoate - CAS: 26761-45-5

- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 9700 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 240 mg/m³ - Duration: 4h
Test: LD50 - Route: Skin - Species: Rat > 3800 mg/kg
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Route: Skin - Species: Guinea pig Positive
butan-1-ol - CAS: 71-36-3

- a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat 2292 mg/kg
 - Test: LD50 - Route: Skin - Species: Rabbit 3430 mg/kg
 - Test: LC0 - Route: Inhalation - Species: Rat > 17.76 mg/l - Duration: 4h
 - Test: NOAEL - Route: Oral - Species: Rat 125 mg/kg - Notes: bw/day
 - b) skin corrosion/irritation:
 - Test: Skin Irritant Positive
 - c) serious eye damage/irritation:
 - Test: Eye Irritant Positive
 - e) germ cell mutagenicity:
 - Test: Ames test Negative
 - Test: chromosomal aberration test Negative
 - g) reproductive toxicity:
 - Test: NOAEL - Route: Oral - Species: Rat 1454 mg/kg - Notes: bw/day
 - h) STOT-single exposure:
 - Test: Respiratory Tract Irritant Positive
- sodium hydroxide - CAS: 1310-73-2
- b) skin corrosion/irritation:
 - Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive
 - c) serious eye damage/irritation:
 - Test: Eye Irritant - Species: Rabbit Positive - Source: Guidelines 405 Test OECD
 - e) germ cell mutagenicity:
 - Test: Ames test - Species: Salmonella Typhimurium Negative

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.

The product is classified: Aquatic Chronic 3 - H412

2,3-epoxypropyl neodecanoate

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 9.6 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia 4.8 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae 3.5 mg/l - Duration h: 96

butan-1-ol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1376 mg/l - Duration h: 96 - Notes: Species:

Pimephales promelas

Endpoint: EC50 - Species: Daphnia = 1328 mg/l - Duration h: 48 - Notes: Species:

Daphnia magna

Endpoint: EC50 - Species: Algae = 225 mg/l - Duration h: 96 - Notes: Species:

Selenastrum capricornutum

sodium hydroxide

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 189 mg/l - Duration h: 48

Endpoint: EC0 - Species: Daphnia = 40.4 mg/l - Duration h: 48 - Notes: Species:

Ceriodaphnia dubia

Endpoint: LC50 - Species: Fish 125 mg/l - Duration h: 96 - Notes: Species: Gambusia affinis

Endpoint: LC50 - Species: Fish 45.4 mg/l - Duration h: 96 - Notes: Species

Oncorhynchus mykiss

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- 12.2. Persistence and degradability
 - 2,3-epoxypropyl neodecanoate - CAS: 26761-45-5
 - Biodegradability: Readily biodegradable - Test: OSCE 302 A - Duration: 22 - 36 d - %: 68 - Notes: +/-5%
- 12.3. Bioaccumulative potential
 - 2,3-epoxypropyl neodecanoate - CAS: 26761-45-5
 - Bioaccumulation: Very low bioaccumulative - Test: log Pow 2.6
- 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)

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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)

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
Restriction 40

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

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:

H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.

| Hazard class and hazard category | Code | Description |
|----------------------------------|------------|--|
| Met. Corr. 1 | 2.16/1 | Substance or mixture corrosive to metals, Category 1 |
| Flam. Liq. 3 | 2.6/3 | Flammable liquid, Category 3 |
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Skin Corr. 1A | 3.2/1A | Skin corrosion, Category 1A |
| Skin Corr. 1B | 3.2/1B | Skin corrosion, Category 1B |
| 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 |
| Skin Sens. 1 | 3.4.2/1 | Skin Sensitisation, Category 1 |
| Muta. 2 | 3.5/2 | Germ cell mutagenicity, Category 2 |
| STOT SE 3 | 3.8/3 | Specific target organ toxicity - single exposure, Category 3 |
| Aquatic Chronic 2 | 4.1/C2 | Chronic (long term) aquatic hazard, category 2 |
| Aquatic Chronic 3 | 4.1/C3 | Chronic (long term) aquatic hazard, category 3 |

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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 |
|---|--------------------------|
| Skin Sens. 1, H317 | Calculation method |
| Muta. 2, H341 | Calculation method |
| Aquatic Chronic 3, H412 | 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.

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. |