

Safety Data Sheet

EVAPORATOR CLEANER



Safety Data Sheet dated 17/5/2021, version 7.0

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: EVAPORATOR CLEANER

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

Recommended use:

Non-foam cleaner for A/C systems

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, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.

 Warning, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

H319 Causes serious eye irritation.

Precautionary statements:

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

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

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

Special Provisions:

None

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

None

Safety Data Sheet

EVAPORATOR CLEANER



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
$\geq 50\%$ - $< 60\%$	propane	Index number: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 REACH No.: 01-21194869 44-21-XXXX	2.2/1A Flam. Gas 1A H220 2.5 Press. Gas H280
$\geq 20\%$ - $< 25\%$	butane	Index number: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 REACH No.: 01-21194746 91-32-XXXX	2.2/1A Flam. Gas 1A H220 2.5 Press. Gas H280
$\geq 10\%$ - $< 12.5\%$	isobutane	Index number: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 REACH No.: 01-21194853 95-27-XXXX	2.2/1A Flam. Gas 1A H220 2.5 Press. Gas H280
$\geq 7\%$ - $< 10\%$	propan-2-ol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-21194575 58-25-XXXX	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319 3.8/3 STOT SE 3 H336

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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

Wash contaminated clothing before using them.

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.

Safety Data Sheet

EVAPORATOR CLEANER



- 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:
None

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:
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
Wear personal protection equipment.
Remove all sources of ignition.
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.
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
Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
Keep away from oxidants.
Instructions as regards storage premises:

Safety Data Sheet

EVAPORATOR CLEANER



- Cool and adequately ventilated.
- 7.3. Specific end use(s)
Information not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- propane - CAS: 74-98-6
 - ACGIH - Notes: (D, EX) - Asphyxia
- butane - CAS: 106-97-8
 - ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair
- isobutane - CAS: 75-28-5
 - ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair
- propan-2-ol - CAS: 67-63-0
 - ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair
 - AGW - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm
 - MAK - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm
 - VLA - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm
 - VLEP - STEL(15min): 980 mg/m³, 400 ppm
 - WEL - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm
 - TLV - TWA(8h): 980 mg/m³, 400 ppm - STEL(15min): 1225 mg/m³, 500 ppm
 - NDS - TWA(8h): 900 mg/m³ - STEL(15min): 1200 mg/m³
 - NPHV - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³
 - MV - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 2000 mg/m³, 800 ppm
 - GVI - TWA(8h): 999 mg/m³, 400 ppm - STEL(15min): 1250 mg/m³, 500 ppm
 - TLV (CZ) - TWA(8h): 500 mg/m³, 200 ppm - STEL(15min): 1000 mg/m³, 400 ppm
 - TLV (EST) - TWA(8h): 350 mg/m³, 150 ppm - STEL(15min): 600 mg/m³, 250 ppm

DNEL Exposure Limit Values

- propan-2-ol - CAS: 67-63-0
 - Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects
 - Worker Industry: 500 mg/m³ - Consumer: 89 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
 - Worker Industry: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

- propan-2-ol - CAS: 67-63-0
 - Target: Fresh Water - Value: 140.9 mg/l
 - Target: Marine water - Value: 140.9 mg/l
 - Target: Freshwater sediments - Value: 552 mg/kg
 - Target: Aquatic, periodic release - Value: 140.9 mg/l
 - Target: Microorganisms in sewage treatments - Value: 2251 mg/l
 - Target: Secondary poisoning - Value: 160 mg/kg
 - Target: Soil (agricultural) - Value: 28 mg/kg

8.2. Exposure controls

Eye protection:

Basket eye glasses.

Protection for skin:

Not needed for normal use.
Full protection suit.

Protection for hands:

Gloves with long cuffs.
Suitable material:
CR (polychloroprene, chloroprene rubber).

Safety Data Sheet

EVAPORATOR CLEANER



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:

In case of exceeding the threshold value of the substance or one or more of the substances present in the product, it is advisable to wear a mask with type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (see standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided.

The use of respiratory protective equipment is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by the masks is limited.

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:	colourless	--	--
Odour:	characteristic perfumed	--	--
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:	<0 ° C	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	partial	--	--
Solubility in oil:	total	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.8 g/mL (+20°C / +68°F)	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

Safety Data Sheet

EVAPORATOR CLEANER



- 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
It can catch fire on contact with oxidising mineral acids.
- 10.4. Conditions to avoid
Avoid overheating, electrostatic discharge and all sources of ignition.
- 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
The product is classified: Eye Irrit. 2 H319
- 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:

- propan-2-ol - CAS: 67-63-0
a) acute toxicity:

Safety Data Sheet

EVAPORATOR CLEANER



Test: LD50 - Route: Oral - Species: Rat 4710 mg/kg
Test: LD50 - Route: Skin - Species: Rat 12800 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat 72.6 mg/l - Duration: 4h
Test: LD50 - Route: Skin - Species: Rabbit 6290 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

propan-2-ol

a) Aquatic acute toxicity:

Endpoint: EC0 - Species: Fish 10000 mg/l - Duration h: 48 - Notes: Pimephales promelas

Endpoint: LC50 - Species: Fish > 1400 mg/l - Duration h: 96 - Notes: Lepomis macrochirus

Endpoint: LC50 - Species: Fish 6550 mg/l - Duration h: 96 - Notes: Pimephales promelas

12.2. Persistence and degradability

propan-2-ol - CAS: 67-63-0

Biodegradability: Readily biodegradable

12.3. Bioaccumulative potential

propan-2-ol - CAS: 67-63-0

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05

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

ADR-UN number: 1950

IATA-Un number: 1950

IMDG-Un number: 1950

14.2. UN proper shipping name

ADR-Shipping Name: AEROSOLS flammable

IATA-Technical name: Aerosols, flammable

IMDG-Technical name: AEROSOLS

14.3. Transport hazard class(es)

ADR-Class: 2

IATA-Class: 2.1

Safety Data Sheet

EVAPORATOR CLEANER



- IMDG-Class: 2.1
- 14.4. Packing group
- 14.5. Environmental hazards
IMDG-EMS: F-D, S-U
- 14.6. Special precautions for user
ADR-Transport category (Tunnel restriction code): D
IATA-Passenger Aircraft: Y203
IATA-Cargo Aircraft: Y203
IMDG-Technical name: AEROSOLS
- 14.7. Maritime transport in bulk according to IMO instruments

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)
- 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
 - Product belongs to category: P3a
- 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:

Safety Data Sheet

EVAPORATOR CLEANER



H220 Extremely flammable gas.
 H280 Contains gas under pressure; may explode if heated.
 H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Hazard class and hazard category	Code	Description
Flam. Gas 1A	2.2/1A	Flammable gas, Category 1A
Aerosols 1	2.3/1	Aerosol, Category 1
Press. Gas	2.5	Gases under pressure
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878. 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
Aerosols 1, H222, H229	On basis of test data
Eye Irrit. 2, H319	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"

Safety Data Sheet

EVAPORATOR CLEANER



	(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.