Safety Data Sheet
EVO TABS

Safety Data Sheet dated 9/11/2022, version 4.0
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: EVO TABS

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
Purifying cleaner for evaporators in tablet
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 Irrit. 2, Causes skin irritation.


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

Adverse physicochemical, human health and environmental effects:
No other hazards
2.2. Label elements
Hazard pictograms:



Warning
Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.
Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves and eye/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
Special Provisions:
None
Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 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
>= 40% - < 50%	sodium carbonate	Index number: 011-005-00-2 CAS: 497-19-8 EC: 207-838-8	3.3/2 Eye Irrit. 2 H319
>= 25% - < 30%	citric acid monohydrate	CAS: 5949-29-1 EC: 201-069-1 REACH No.: 01-2119457026-42-XXXX	3.3/2 Eye Irrit. 2 H319
>= 5% - < 7%	sulphamidic acid; sulphamic acid; sulfamic acid	Index number: 016-026-00-0 CAS: 5329-14-6 EC: 226-218-8	3.3/2 Eye Irrit. 2 H319 3.2/2 Skin Irrit. 2 H315 4.1/C3 Aquatic Chronic 3 H412
>= 2.5% - < 5%	long chain alcohol, alkoxylated	CAS: 166736-08-9	3.2/2 Skin Irrit. 2 H315 3.3/2 Eye Irrit. 2 H319
>= 1% - < 2.5%	Sulfuric acid, mono-C12-14-alkyl esters, sodium salts (Alternate CAS n. 68585-47-7)	CAS: 85586-07-8 EC: 287-809-4	3.1/4/Oral Acute Tox. 4 H302 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

After contact with skin, wash immediately with 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 opthalmologist 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

For symptoms and effects caused by substances, see section 11.

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.
CO2 or Dry chemical fire extinguisher.
Foam fire extinguisher.
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

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:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Store away from direct sunlight.
Keep in a dry and well ventilated place.
Keep away from food, drink and feed.
Incompatible materials:
See subsection 10.5
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

citric acid monohydrate - CAS: 5949-29-1

TLV - TWA(8h): 10 mg/m3

DNEL Exposure Limit Values

sodium carbonate - CAS: 497-19-8

Consumer: 10 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term (acute)

Worker Professional: 10 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Sulfuric acid, mono-C12-14-alkyl esters, sodium salts (Alternate CAS n. 68585-47-7) - CAS: 85586-07-8

Consumer: 24 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 285 mg/m³ - Consumer: 85 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 4060 mg/kg - Consumer: 2440 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

citric acid monohydrate - CAS: 5949-29-1

Target: Fresh Water - Value: 0.44 mg/L

Target: Marine water - Value: 0.04 mg/L

Target: Freshwater sediments - Value: 34.6 mg/kg

Target: Marine water sediments - Value: 3.46 mg/kg

Target: Soil (agricultural) - Value: 33.1 mg/kg

Target: Microorganisms in sewage treatments - Value: 1000 mg/L

Sulfuric acid, mono-C12-14-alkyl esters, sodium salts (Alternate CAS n. 68585-47-7) - CAS: 85586-07-8

Target: Fresh Water - Value: 0.102 mg/L

Target: Marine water - Value: 0.01 mg/L

Target: Freshwater sediments - Value: 3.58 mg/kg

Target: Marine water sediments - Value: 0.358 mg/kg

8.2. Exposure controls

Eye protection:

Protective airtight goggles (ref. Standard EN 166).

Protection for skin:

Safety shoes.

Overall.

Protection for hands:

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

Suitable material:

CR (polychloroprene, chloroprene rubber).

FKM (fluoro 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:

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:	Solid	--	--
Colour:	White	--	--
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:	9	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	soluble	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	2.038 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
There are no particular risks of reaction with other substances in normal conditions of use.
sulfamic acid: decomposes at 205 °C / 401 °F.
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
Under normal use and storage conditions, no hazardous reactions are expected.
sulfamic acid: risk of explosion on contact with chlorine. It reacts dangerously with metal salts of nitrates and nitrites.
10.4. Conditions to avoid
Stable under normal conditions.
10.5. Incompatible materials

sulfamic acid: chlorine, nitric acid, nitrates and nitrites of sodium and potassium.

10.6. Hazardous decomposition products

sulfamic acid: sulfur oxides and nitrogen oxides.

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

The product is classified: Skin Irrit. 2 H315

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

Adverse health effects

In the absence of experimental toxicological data on the product itself, the potential risks of the product to health were evaluated based on the properties of substances, according to the criteria laid down by the relevant regulations for the classification. Consider, therefore, the concentration of each substance dangerous possibly mentioned in section 3, to assess the toxicological effects resulting from exposure to the product.

Acute effects: contact with eyes causes irritation; symptoms may include: redness, edema, pain and tearing. Ingestion may cause health disorders, including abdominal pains with sting, nausea and vomiting.

Acute effects: contact with skin may cause irritation with erythema, edema, dryness and chapped skin.

Toxicological information of the main substances found in the product:

sodium carbonate - CAS: 497-19-8

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 4090 mg/kg

Test: LD50 - Route: Skin - Species: Mouse 117 mg/kg

Test: LD50 - Route: Inhalation - Species: Rat 2.3 mg/L - Duration: 2 h

citric acid monohydrate - CAS: 5949-29-1

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Mouse = 5400 mg/kg - Source: OCSE 401
Test: LD50 - Route: Oral - Species: Rat = 11700 mg/kg - Source: OCSE 401
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Source: OCSE 402
Test: NOAEL - Route: Oral - Species: Rat 4 mg/kg - Notes: bw/day
e) germ cell mutagenicity:
Test: Mutagenesis Negative - Source: OECD 471 - Notes: Ames Test (in vitro)
Test: Mutagenesis Negative - Source: OECD 475 - Notes: chromosomal aberration test (in vivo)
g) reproductive toxicity:
Test: NOAEL - Species: Rat > 295 mg/kg - Notes: bw/day; effective dose (fetal development)
sulphamidic acid; sulphamic acid; sulfamic acid - CAS: 5329-14-6
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat 1450 mg/kg
long chain alcohol, alkoxylated - CAS: 166736-08-9
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts (Alternate CAS n. 68585-47-7) - CAS: 85586-07-8
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat 2000 mg/kg

11.2. Information on other hazards
Endocrine disrupting properties:
No endocrine disruptor substances present in concentration >= 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
citric acid monohydrate
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 440 mg/L - Duration h: 48 - Notes: Leuciscus idus melanotus
Endpoint: LC50 - Species: Daphnia = 1535 mg/L - Duration h: 24 - Notes: Daphnia magna
Endpoint: LC50 - Species: Algae = 425 mg/L - Duration h: 168 - Notes: Scenedesmus quadricauda
c) Bacteria toxicity:
Endpoint: LC50 > 10000 mg/L - Duration h: 16 - Notes: Pseudomonas putida
long chain alcohol, alkoxylated
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish 100 mg/L - Duration h: 96
Endpoint: EC50 - Species: Daphnia 100 mg/L - Duration h: 48
Endpoint: EC50 - Species: Algae 100 mg/L - Duration h: 72
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts (Alternate CAS n. 68585-47-7)
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Algae 20 mg/L - Duration h: 72
12.2. Persistence and degradability
N.A.
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 >= 0.1%
12.7. Other adverse effects
None

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recover if possible. 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-Enviromental 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)

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:

No restriction.

Restrictions related to the substances contained:

Restriction 75

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:

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

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 4: First aid measures

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 Irrit. 2, H315	Calculation method
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" (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.