

Safety Data Sheet

ACID TEST



Safety Data Sheet dated 12/1/2021, 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: ACID TEST

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

Recommended use:

Tester to verify the presence of acid in AC/R 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)

 Warning, Skin Irrit. 2, Causes skin irritation.

 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:

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements:

P280 Wear protective gloves and eye protection.

Special Provisions:

None

Contains

butan-1-ol

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 $\geq 0.1\%$

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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
>= 90%	3-butoxypropan-2-ol	Index number: 603-052-00-8 CAS: 5131-66-8 EC: 225-878-4 REACH No.: 01-21194755 27-28-XXXX	 3.3/2 Eye Irrit. 2 H319  3.2/2 Skin Irrit. 2 H315
>= 2.5% - < 5%	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
>= 2.5% - < 5%	2-butoxy-1-propanol	CAS: 15821-83-7 EC: 605-138-0	 3.3/2 Eye Irrit. 2 H319  3.2/2 Skin Irrit. 2 H315
>= 0.0001% - < 0.01%	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

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.

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

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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.

Hazardous combustion products:

May include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Use normal fire fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant (EN469), flame retardant gloves (EN 659) and fire brigade boots (HO A29 or A30).

This product floats on the surface of the water and can reignite.

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.

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 away from direct sunlight.

Keep in a dry and well ventilated place.

Store between + 5 ° C / + 41 ° F and + 35 ° C / + 95 ° F.

Keep away from food, drink and feed.

Incompatible materials:

See subsection 10.5

Instructions as regards storage premises:

Cool and adequately ventilated.

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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

3-butoxypropan-2-ol - CAS: 5131-66-8

Worker Professional: 44.00 mg/kg - Consumer: 16.00 mg/kg - Exposure: Human

Dermal - Frequency: Long Term, systemic effects - Endpoint: Repeated dose toxicity

Worker Professional: 270.50 mg/m³ - Consumer: 33.80 mg/m³ - Exposure: Human

Inhalation - Frequency: Long Term, systemic effects - Endpoint: Repeated dose toxicity

Consumer: 8.75 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic

effects - Endpoint: Repeated dose toxicity

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

3-butoxypropan-2-ol - CAS: 5131-66-8

Target: Fresh Water - Value: 0.525 mg/l

Target: Marine water - Value: 0.0525 mg/l

Target: Aquatic, periodic release - Value: 5.25 mg/l

Target: Freshwater sediments - Value: 2.36 mg/kg - Notes: referred to: dry weight

Target: Marine water sediments - Value: 0.236 mg/kg - Notes: referred to: dry weight

Target: Microorganisms in sewage treatments - Value: 10.00 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:

One-time gloves.

Suitable material:

Butyl caoutchouc (butyl rubber).

CR (polychloroprene, chloroprene rubber).

PE (polyethylene).

Material thickness: 0.4 mm minimum.

Break through time : > 480 min

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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 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:	violet	--	--
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:	63 ° C	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.879 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
The product is classified: Skin Irrit. 2 H315
- 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:

3-butoxypropan-2-ol - CAS: 5131-66-8

- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat 3300 mg/kg bw - Source: ECHA - Notes:
OECD 401
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg bw - Source: ECHA
- b) skin corrosion/irritation:

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Test: Skin Irritant - Route: Skin - Species: Rabbit Positive - Source: ECHA - Notes: OECD 404

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin - Species: Guinea pig Negative - Source: ECHA - Notes: OECD 406

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%

Other information:

None in particular.

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

3-butoxypropan-2-ol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 560 mg/l - Duration h: 96 - Notes: Species: Poecilia reticulata - Method: OECD 203 - Source: ECHA

Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 48 - Notes: Species: Daphnia magna - Method: OECD 202 - Source: ECHA

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

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- 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
- 12.2. Persistence and degradability
- 3-butoxypropan-2-ol - CAS: 5131-66-8
- Biodegradability: Readily biodegradable - Test: OECD 301 E - Duration: 28 d - %: 90 - Notes: ECHA
- 12.3. Bioaccumulative potential
- 3-butoxypropan-2-ol - CAS: 5131-66-8
- Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 1.1 - Notes: Reference temperature: 20°C - pH: 7 - Source: ECHA
- 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

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- 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

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.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

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.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals,

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		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 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
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
Skin Irrit. 2, H315	Calculation method
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.

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.

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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.