



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING


- 1.1. Product identifier
Mixture identification:
Trade name: Hydrogen chloride in ethyl alcohol 29%.
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
Nonaqueous Acid Solvent
- 1.3. Details of the supplier of the safety data sheet
Company:
Gases: Research Innovation & Technology SLU.
C/ Consell de Cent, 419 Principal 1 y 2 - 08009 (Barcelona)
Tel: 93/272.14.00 Fax: 93/215.38.08
Competent person responsible for the safety data sheet:
gmartin@grit.es
- 1.4. Emergency telephone number
+ 34 630 215 910 (24h)


2. HAZARDS IDENTIFICATION

- 2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP)
-  Danger, Flam. Liq. 2, Highly flammable liquid and vapour.

 Warning, Acute Tox. 4, Harmful if inhaled.

 Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

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

 Warning, Met. Corr. 1, May be corrosive to metals.

Adverse physicochemical, human health and environmental effects:
No other hazards

- 2.2. Label elements
Hazard pictograms:



Danger
Hazard statements:
H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.

Precautionary statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P370+P378 In case of fire, use dry chemical powder, alcohol foam, all-purpose AFFF, carbon dioxide or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.

Special Provisions:
None

Contains





hydrogen chloride
2.3. Other hazards

Other Hazards:
No other hazards

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
>= 69% - < 72%	ethanol; ethyl alcohol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH No.: 01-2119457610-43	 2.6/2 Flam. Liq. 2 H225
>= 28% - < 31%	hydrogen chloride	Index number: 017-002-00-2 CAS: 7647-01-0 EC: 231-595-7 REACH No.: 01-2119484862-27	 2.5 Press. Gas H280  3.2/1A Skin Corr. 1A H314  3.1/3/Inhal Acute Tox. 3 H331 EUH071

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
Remove contaminated clothing immediately and dispose off safely.
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 induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.
In case of inhalation, consult a doctor immediately and show him packing or label.

4.2. Most important symptoms and effects, both acute and delayed
None

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: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:
In case of fire, use dry chemical powder, alcohol foam, all-purpose AFFF, carbon dioxide or water spray.
Extinguishing media which must not be used for safety reasons:
Do not use a direct water jet for extinguishing.

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.

6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove all sources of ignition.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
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

7. HANDLING AND STORAGE

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Use localized ventilation system.
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.
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
Always keep in a well ventilated place.
It must be stored at temperatures below 10° C. Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Cool and adequately ventilated.
- 7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
ethanol; ethyl alcohol - CAS: 64-17-5
ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr
MAK - TWA: 960 mg/m3, 500 ppm
hydrogen chloride - CAS: 7647-01-0
EU - TWA(8h): 8 mg/m3, 5 ppm - STEL: 15 mg/m3, 10 ppm
ACGIH - STEL: Ceiling 2 ppm - Notes: A4 - URT irr
- DNEL Exposure Limit Values
ethanol; ethyl alcohol - CAS: 64-17-5
Worker Professional: 950 mg/m3 - Consumer: 114 mg/m3 - Exposure: Human Inhalation -
Frequency: Long Term, systemic effects
Worker Professional: 343 mg/kg bw/day - Consumer: 206 mg/kg bw/day - Exposure: Human
Dermal - Frequency: Long Term, systemic effects
Worker Professional: 1900 mg/m3 - Consumer: 950 mg/m3 - Exposure: Human Inhalation -
Frequency: Short Term, local effects
Consumer: 87 mg/kg bw/day - Exposure: Human Oral - Frequency: Long Term, systemic effects
- PNEC Exposure Limit Values
- 8.2. Exposure controls
- Eye protection:
Face protection umbrella. Face protection shield.
- Protection for skin:
Chemical protection clothing.
- Protection for hands:
Rubber nitrilo: thickness> 0.45 mm Time of perforation> 480 min (EN 374)

Respiratory protection:

Dispose of self-contained breathing apparatus for use in an emergency.
Users of self-contained breathing apparatus should be trained.

Thermal Hazards:

None

Environmental exposure controls:

None

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Transparent liquid	--	--
Odour:	pungent	--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	78 °C (Ethanol)	--	--
Flash point:	13 °C (Ethanol)	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	0,85 bar (55°C)	--	--
Vapour density:	N.A.	--	--
Relative density:	0,943 g/ml (20°C)	--	--
Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable, ignition hazard

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Alkalis and alkaline earth metals - aluminum powder, zinc, etc.

10.5. Incompatible materials

Strong bases.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

cloruro de hidrógeno en etanol al 29%.

a) acute toxicity:

ATEmix - Inhalation (Mist) 1,72414 mg/l

Toxicological information of the main substances found in the product:

ethanol; ethyl alcohol - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 10470 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 15800 mg/Kg bw

h) STOT-single exposure:

Test: NOAEL 1730 mg/kg d

hydrogen chloride - CAS: 7647-01-0

a) acute toxicity:

Test: LC50 - Route: Inhalation Vapour - Species: Rat 2810 mg/kg - Duration: 1h

Test: LD50 - Route: Oral - Species: Rat 915 mg/kg

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin Positive - Notes: extremadamente corrosivo y destructivo para los tejidos

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

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

ethanol; ethyl alcohol - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 14200 mg/l - Duration h: 96 - Notes: OECD 203

Endpoint: EC50 - Species: Daphnia 5012 mg/l - Duration h: 48 - Notes: OECD 202

Endpoint: EC50 - Species: Algae 275 mg/l - Duration h: 72 - Notes: OECD 201

12.2. Persistence and degradability

ethanol; ethyl alcohol - CAS: 64-17-5

Biodegradability	Test	Duration	%	Notes
Readily biodegradable	N.A.	28 days	60	N.A.

12.3. Bioaccumulative potential

ethanol; ethyl alcohol - CAS: 64-17-5

Bioaccumulation	Test		Duration	Notes
Not bioaccumulative	Kow - Partition coefficient	-0.310	N.A.	N.A.
Not bioaccumulative	BCF - Bioconcentration factor	3.2	N.A.	Calculated

hydrogen chloride - CAS: 7647-01-0

Bioaccumulation	Test		Duration	Notes
Not bioaccumulative	N.A.	N.A.	N.A.	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. Other adverse effects
None

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.

14. TRANSPORT INFORMATION



14.1. UN number

ADR-UN Number: 2924
IATA-UN Number: 2924
IMDG-UN Number: 2924

14.2. UN proper shipping name

ADR-Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (hydrogen chloride, ethanol; ethyl alcohol)
IATA-Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (hydrogen chloride, ethanol; ethyl alcohol)
IMDG-Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (hydrogen chloride, ethanol; ethyl alcohol)

14.3. Transport hazard class(es)

ADR-Class: 3
ADR - Hazard identification number: 338
IATA-Class: 3
IATA-Label: 3 + 8
IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II

14.5. Environmental hazards

ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No

14.6. Special precautions for user

ADR-Subsidiary risks: 8
ADR-S.P.: 274
ADR-Transport category (Tunnel restriction code): 2 (D/E)
IATA-Passenger Aircraft: 352
IATA-Subsidiary risks: 8
IATA-Cargo Aircraft: 363
IATA-S.P.: A3 A803
IATA-ERG: 3CH
IMDG-EmS: F-E , S-C
IMDG-Subsidiary risks: 8
IMDG-Stowage and handling: Category B SW2
IMDG-Segregation: -

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
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. 2015/830

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: P5c

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:

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

EUH071 Corrosive to the respiratory tract

Hazard class and hazard category	Code	Description
Press. Gas	2.5	Gases under pressure
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Acute Tox. 3	3.1/3/Inhal	Acute toxicity (inhalation), Category 3
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Eye Dam. 1	3.3/1	Serious eye damage, Category 1

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
Flam. Liq. 2, H225	On basis of test data
Met. Corr. 1, H290	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Corr. 1A, H314	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.
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.