

Safety Data Sheet dated 26/2/2016, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name:

LIQUIDO LAVAGGIO IMPIANTI INFIAMMABILE 1L
11.035F

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

Recommended use:

PRODUCTS FOR AIR CONDITIONING SYSTEMS

Solvent cleaner-industrial product

Uses advised against:

do not use on humans and animals

1.3. Details of the supplier of the safety data sheet

Company:

ELKE S.r.l. Via XXV Aprile 202 10042 Nichelino (To) Italia.

Tel. n. +39 011 9622412

Competent person responsible for the safety data sheet:

Domenico Amosso info@elke-ac.com







1.4. Emergency telephone number

Centro Antiveneni Ospedale Niguarda Milano +39 02.66101029

SECTION 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, Skin Irrit. 2, Causes skin irritation.
-  Warning, Eye Irrit. 2, Causes serious eye irritation.
-  Warning, STOT SE 3, May cause drowsiness or dizziness.
-  Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.
-  Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

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.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.
 H304 May be fatal if swallowed and enters airways.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 Keep container tightly closed.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
 P331 Do NOT induce vomiting.
 P370+P378 In case of fire: extinguish with dry chemical or foam.

Special Provisions:

None

Contents:

EPTANO PURO
 propan-2-ol; isopropyl alcohol; isopropanol

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

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

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
80.1 %	EPTANO PURO	Index number: 601-008-00-2 CAS: 142-82-5 EC: 205-563-8 REACH No.: 01-2119666169-27-XXXX	 2.6/2 Flam. Liq. 2 H225  3.2/2 Skin Irrit. 2 H315  3.3/2 Eye Irrit. 2 H319  3.8/3 STOT SE 3 H336  3.10/1 Asp. Tox. 1 H304  4.1/C2 Aquatic Chronic 2 H411 DECLP (CLP)*
17.3 %	propan-2-ol; isopropyl alcohol; isopropanol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-2119457558-25	 2.6/2 Flam. Liq. 2 H225  3.3/2 Eye Irrit. 2 H319  3.8/3 STOT SE 3 H336
2.59 %	ethanol; ethyl alcohol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6	 2.6/2 Flam. Liq. 2 H225

*DECLP (CLP): This substance is classified in accordance with Note P, Annex VI of EC Regulation 1272/2008. The classification as a carcinogen or mutagen need not apply if it can be shown that the



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substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

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).

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:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Drowsiness

Pulmonary oedema

Narcosis

Drowsiness

In case of severe poisoning, central nervous system depression, hypotension, bradycardia and hypothermia may occur.

Pulmonary irritation

Nausea

Dizziness

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:

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

In case of fire: extinguish with dry chemical or foam.

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

GENERAL INFORMATION

Cool down with water containers to avoid decomposition of the product and the development of substances of concern to human health. Always wear full fire protection equipment. Collect the water shutoff that must not be discharged into sewers. Dispose of contaminated water



used for extinguishing and fire performance according to current regulations.

EQUIPMENT

Normal clothing to fight the fire, as an open-circuit compressed air breathing apparatus (137), flame retardant gloves (EN469), full (659) and boots for firefighters (I A29 or A30).

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.
 - 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
 - store in a cool, well ventilated place, away from heat, flames, sparks or other sources of ignition
 - keep only in the original container away from sunlight neighborhoods
 - avoid contact with skin and eyes, inhalation of vapours/mists/dusts.
 - do not use empty containers before they are cleaned.
 - contaminated clothing must be replaced before entering the dining areas.
 - at work do not eat or drink.
 - do not smoke
 - Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
 - 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)
 - PRODUCTS FOR AIR CONDITIONING SYSTEMS
 - Solvent cleaner-industrial product

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

ACGIH - LTE(8h): 200 ppm - STE: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair

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

ACGIH - STE: 1000 ppm - Notes: A3 - URT irr

DNEL Exposure Limit Values

EPTANO PURO - CAS: 142-82-5

Worker Professional: 1100 mg/kg - Consumer: 640 mg/kg - Exposure: Human

Inhalation - Frequency: Short Term, local effects

Worker Professional: 1300 mg/kg - Consumer: 1200 mg/kg - Exposure: Human

Inhalation - Frequency: Short Term, systemic effects

Consumer: 180 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 840 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Basket eye glasses.

Protection for skin:

Safety shoes.

Flame-retardant protective clothing.

Protection for hands:

PVC (polyvinyl chloride).

Respiratory protection:

Mask with filter "A" , brown colour

Thermal Hazards:

Do not expose to temperatures exceeding 50° c.

Environmental exposure controls:

emissions from production processes, including those from ventilation equipment should be inspected for the purposes of enforcement of environmental protection

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid	--	--
Odour:	characteristic	--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	-20°C	--	--
Initial boiling point and boiling range:	90°C	--	--
Flash point:	0 < fp < 21 ° C	--	--
Evaporation rate:	3,7 (n butac =1)	--	--
Solid/gas flammability:	N.A.	--	--

Upper/lower flammability or explosive limits:	inf: 0,7-7% (V/V) espl: 0,6-7% (V/V)	--	--
Vapour pressure:	5,3 kPa (20 ° C)	--	--
Vapour density:	>2	--	--
Relative density:	0.75 Kg/l	--	--
Solubility in water:	undissolvable	--	--
Solubility in oil:	complete	--	--
Partition coefficient (n-octanol/water):	2,1 - 6 log Pow	--	--
Auto-ignition temperature:	>200°C	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes:
kinematic viscosity:	kv <= 1,4 mm ² /s (a 40°C)	--	--
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

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

heat, flames and sparks. exposure to light and humidity

keep away from heat, sources of ignition

10.5. Incompatible materials

oxidizing agents

10.6. Hazardous decomposition products

the product is flammable, following combustion can lead to the formation of dangerous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

EPTANO PURO - CAS: 142-82-5



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- b) skin corrosion/irritation:
Test: Skin Irritant - Route: Skin - Species: Rabbit Positive
 - c) serious eye damage/irritation:
Test: Eye Irritant - Route: Inhalation Mist - Species: Rabbit > 200 Ppm
 - h) STOT-single exposure:
Test: Inhalation Sensitization - Route: Inhalation Vapour Positive
- propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5840 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

LAVAGGIO IMPIANTI INFIAMMABILE -

The introduction of even small amounts of liquid in the respiratory system in case of ingestion or vomiting may cause pneumonia and pulmonary edema.

Acute effects: contact with skin has irritation with erythema, edema, skin dryness or cracking. Inhalation of vapors may cause moderate irritation of the upper respiratory tract. If ingested, it can cause health disorders, which include abdominal pain with heartburn, nausea and vomiting.

The product contains volatile substances which may cause significant depression of the central nervous system (CNS), with effects such as drowsiness, dizziness, loss of reflexes, narcosis.

- ethanol; ethyl alcohol - CAS: 64-17-5
LD50 (RABBIT) ORAL: 6300 MG/KG
LD50 (RAT) ORAL SINGLE DOSE: 7060 MG/KG

If not differently specified, the information required in Regulation (EU)2015/830 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. Use according to good working practices, avoiding to disperse the product in the environment. Notify the competent authorities if the product have reached waterways or sewers or if contaminated soil or vegetation.

The product is to be regarded as dangerous for the environment and presents toxicity to aquatic organisms with long-term adverse effects in the aquatic environment.

EPTANO PURO - CAS: 142-82-5

- a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish 10 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia 4.5 mg/l - Duration h: 48
- b) Aquatic chronic toxicity:
Endpoint: NOEC - Species: Daphnia 2.6 mg/l - Notes: riproduzione
- c) Bacteria toxicity:



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Endpoint: EC50 - Species: 1 15.41 mg/l - Duration h: 40 - Notes: inibizione della crescita

e) Plant toxicity:

Endpoint: EC50 - Species: Algae 3.1 mg/l
propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72

Endpoint: EC50 - Species: Fish > 100 mg/l - Duration h: 48

12.2. Persistence and degradability

None

EPTANO PURO - CAS: 142-82-5

Biodegradability: N.A.Test: N.A.Duration: N.A.%: N.A.Notes: sostanza UVCB

12.3. Bioaccumulative potential

EPTANO PURO - CAS: 142-82-5

Bioaccumulation: N.A.Test: N.A.N.A.Duration: N.A.Notes: sostanza UVCB

12.4. Mobility in soil

EPTANO PURO - CAS: 142-82-5

Mobility in soil: N.A.Test: N.A.N.A.Duration: N.A.Notes: sostanza UVCB

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. 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

ADR-UN number: 1993

14.2. UN proper shipping name

14.3. Transport hazard class(es)

ADR-Class: 3

ADR-Label: 3

IATA-Class: 3

IATA-Label: 3

IMDG-Class: 3.2 Flammable liquid nas UN1993

14.4. Packing group

ADR-Packing Group: 2

IATA-Packing group: 2

IMDG-Packing group: 2

14.5. Environmental hazards

Marine pollutant: Marine pollutant

14.6. Special precautions for user

IMDG-Page: 3230

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No

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)



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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) 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)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Text of phrases referred to under heading 3:

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

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.



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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.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.