

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: **411 00 19820-6270**
Product name: **LPG SYSTEM CLEANER**

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

Intended use: **Additive for vehicle LPG systems**

1.3. Details of the supplier of the safety data sheet

Name: **Meccanocar Italia S.r.l.**
Full address: **Via San Francesco, 22**
District and Country: **56033 Capannoli (PI)**
Italy
Tel. +39 0587 609433
Fax +39 0587 607145

e-mail address of the competent person
responsible for the Safety Data Sheet

moreno.meini@meccanocar.it

1.4. Emergency telephone number

For urgent inquiries refer to

National Poisons Information Service: +44 121 507 4123

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222 H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
Hazardous to the aquatic environment, chronic toxicity, category 4	H413	May cause long lasting harmful effects to aquatic life.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

LPG SYSTEM CLEANER



Signal words: Danger

Hazard statements:

H222 Extremely flammable aerosol.
H229 Pressurised container: may burst if heated.
H413 May cause long lasting harmful effects to aquatic life.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P211 Do not spray on an open flame or other ignition source.
P331 Do NOT induce vomiting.
P301+P310 IF SWALLOWED: immediately call a POISON CENTER / doctor.

Contains: HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
PROPANE		
CAS 74-98-6	58 ≤ x < 62	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: U
EC 200-827-9		
INDEX 601-003-00-5		
Reg. no. 01-2119486944-21-XXXX		
HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC		
CAS -	35 ≤ x < 37,5	Flam. Liq. 3 H226, Asp. Tox. 1 H304, Aquatic Chronic 4 H413, EUH066
EC 923-037-2		
INDEX -		
Reg. no. 01-2119471991-29-XXXX		
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM		

CAS 64742-94-5 1,5 ≤ x < 2 Asp. Tox. 1 H304, EUH066
EC 265-198-5
INDEX 649-424-00-3
Reg. no. 01-2119463588-24-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 61,20 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
	TLV-ACGIH	ACGIH 2019

PROPANE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
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		mg/m ³	ppm	mg/m ³	ppm
VLA	ESP		1000		
TLV	NOR	900	500		
TLV-ACGIH			1000		

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				19 mg/kg bw/d				

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION

None required.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

The suitability of the gloves and breakthrough time will differ according to the specific conditions of use. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for conditions of use. Inspect and replace worn or damaged gloves. The types of gloves to consider for this material include:

If prolonged or repeated contact is likely, the use of chemical resistant gloves is recommended. If contact with forearms is likely, wear glove-style gloves. Nitrile, CEN EN 420 and EN 374 standards provide general requirements and lists of glove types.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	colourless
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0,6
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Total solids (250°C / 482°F)	37,79 %
VOC (Directive 2010/75/EC) :	98,95 % - 593,67 g/litre
VOC (volatile carbon) :	48,70 % - 292,19 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

May form flammable mixtures with: air.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

Avoid overheating.

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

avoid heat, sparks, open flames and other sources of ignition

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

strong oxidants

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

LD50 (Oral) > 5000 mg/kg Rat

LD50 (Dermal) > 2000 mg/kg Rabbit

LC50 (Inhalation) > 5,28 mg/l/4h Rat

PROPANE

Method: To study the concentrations at which the effects of the CNS occur following exposure by inhalation to propane by measuring LC50 (15 min) and EC50 (CNS) (10 min) in rats.

Reliability: 2

Species: Rat (Alderley Park (SPF); male / female)

Route of exposure: Inhalation

Results: LC50> 800 000 ppm

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD Guideline 423

Reliability: 2

Species: Rat (Wistar; male / female)

Route of exposure: Oral

Results: LD50> 15 000 mg / kg bw

Method: Equivalent or similar to OECD Guideline 403

Reliability: 2

Species: Rat (Crj; CD (SD); male / female)

Route of exposure: Inhalation (vapors)

Results: LC50> 4 951 mg / m³ air

Method: Equivalent or similar to OECD Guideline 402

Reliability: 2

Species: Rabbit (New Zealand White; male / female)

Route of exposure: Dermal

Results: LD50> 5 000 mg / kg bw

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Method: EPA OTS 798.1175

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: LD50:> 5 000 mg / kg bw

Method: Equivalent or similar to OECD 403

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Inhalation (vapor)

Results: LC50:> 5.28 mg / L air

Method: EPA OTS 798.1100

Reliability: 1

Species: Rabbit (New Zealand White; male / female)

LPG SYSTEM CLEANER

Route of exposure: Dermal
Results: LD50:> 2 000 mg / kg bw

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD Guideline 404
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Irritating

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Method: EPA Guidelines in FR Vol. 44, No. 145, pgs. 44054-44093
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Irritating

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD Guideline 405
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Method: EPA OTS 798.4500
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Method: Equivalent or similar to OECD 406-read across
Reliability: 1
Species: guinea pig (Hartley; male)
Route of exposure: Dermal
Results: Not sensitizing

Skin sensitization
HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

LPG SYSTEM CLEANER

Method: Equivalent or similar to OECD Guideline 406
Reliability: 2
Species: guinea pig (Hartley; female)
Route of exposure: Dermal
Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

PROPANE

Method: OECD 471 in vitro test
Reliability: 1
Species: Histidine Salmonella
Results: Negative with or without metabolic activation
Method: OECD 474-test in vivo
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: Negative

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: OECD Guideline 471-in vitro test
Reliability: 1
Species: S. typhimurium
Results: Negative
Method: Equivalent or similar to OECD Guideline 474-test in vivo
Reliability: 1
Species: Mouse (CD-1; male / female)
Route of exposure: Oral
Results: Negative

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Method: Equivalent or similar to OECD 479 in vitro test
Reliability: 1
Species: Chinese hamster ovary
Results: Negative
Method: Equivalent or similar to OECD 479 in vivo test
Reliability: 1
Species: Mouse (B6C3F1; male / female)
Route of exposure: Oral
Results: Positive in males, negative in females

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD Guideline 453
Reliability: 1
Species: Rat (F344 / N; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC > = 2 200 mg / m³ air

REPRODUCTIVE TOXICITY

LPG SYSTEM CLEANER

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility
PROPANE

Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation
Results: NOAEC (fertility) 10 000 ppm

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD TG 413
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC > = 400 ppm

Adverse effects on development of the offspring
PROPANE

Method: EPA OPPTS 870.3700
Reliability: 1
Species: Rat (VAF / Plus®, Sprague-Dawley Derived (CD®) CrI: CD® IGS BR)
Route of exposure: Inhalation (gas)
Results: NOAEC (development) 10 426 ppm

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

PROPANE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

PROPANE

Method: OECD 422
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC 16 000 ppm

HYDROCARBONS, C10-C12, ISOALKANS, <2% AROMATIC

Method: Equivalent or similar to OECD Guideline 422

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: NOAEL> = 1000 mg / kg / day

Method: Equivalent or similar to OECD Guideline 413

Reliability: 1

Species: Rat (albino; male / female)

Route of exposure: Inhalation (vapors)

Results: NOAEC 10186 mg / m3

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for repeated exposure.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product may damage the structure and/or the functions of the aquatic ecosystems in the long and/or delayed term.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

Petroleum distillates, charcoal, vegetable extracts: they are mixtures of paraffinic, naphthenic, diterpenic and aromatic hydrocarbons. Their behaviour on the environment depends on the concentration. In each case use, according to good working practices, avoiding disposal in the environment. As a rule, the product is poorly biodegradable.

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM

Oil distillates, coal, plant extracts: they are blends of parafin hydrocarbons, naphthenes, diterpenes and aromatics. Their behaviour in the environment depends on their composition. In any case they should be used according to good working practice, avoiding discharging it into the environment.

SOLVENT NAPHTHA (PETROLEUM),

HEAVY AROM

Rapidly degradable

PROPANE

Solubility in water

0,1 - 100 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

PROPANE

Partition coefficient: n-octanol/water

1,09

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, 1950
IATA:

14.2. UN proper shipping name

ADR / RID: AEROSOLS
IMDG: AEROSOLS
IATA: AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1



14.4. Packing group

ADR / RID, IMDG, -
IATA:

14.5. Environmental hazards

ADR / RID: NO

LPG SYSTEM CLEANER

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special Provision: -		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special Instructions:	A145, A167, A802	

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

Information not relevant

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EC: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>	
Point	40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 3	Flammable liquid, category 3
Press. Gas (Liq.)	Liquefied gas
Asp. Tox. 1	Aspiration hazard, category 1
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic toxicity, category 4
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H304	May be fatal if swallowed and enters airways.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value

- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 10 / 11 / 12 / 15 / 16.