Safety data sheet

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

1.1. Product identifier

Code:	**C00084**
Product name	**PROTETTIVO MORSETTI SPRAY**

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

Intended use	**Terminals and contacts preservative "Aerosol", solvent-based.**

1.3. Details of the supplier of the safety data sheet

Name	**PIGAL s.p.a.**
Full address	**Via G. Rossa, 2**
District and Country	**40053 VALSAMOGGIA - Crespellano (BO)** **ITALIA**
	Tel. +39 051969068
	Fax +39 051969353
e-mail address of the competent person responsible for the Safety Data Sheet	**health.safety@pigal.it; pigalab@pigal.it**

1.4. Emergency telephone number

For urgent inquiries refer to	**+39 051969068 ore ufficio/office hours (8.30-13; 14-17.30) 118 (contattare il centro antiveleni più vicino)/please contact your near local poison control center**

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 Directives 67/548/EEC and 1999/45/EC (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Aerosol 1	H222 H229
Eye Irrit. 2	H319
Skin Irrit. 2	H315
STOT SE 3	H336
Aquatic Chronic 3	H412

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:
F+-Xi
R phrases:
12-38-52/53-67

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

2.2. Label elements.

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

Hazard pictograms:

Signal words: Danger

Hazard statements:

H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat / sparks / open flames / hot surfaces. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: do not pierce or burn, even after use.
P261	Avoid breathing spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor / physician if you feel unwell.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.

Contains: C7 hydrocarbons - n-alkanes, isoalkanes, cyclic

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
Liquefied petroleum gas			
CAS. 68476-40-4 EC. 270-681-9 INDEX. 649-199-00-1 Reg. no. 01-211948657-22	30 - 32,5	F+ R12, Note K	Flam. Gas 1 H220, Press. Gas H280, Note K
C7 hydrocarbons - n-alkanes, isoalkanes, cyclic			
CAS. - EC. 927-510-4 INDEX. - Reg. no. 01-2119475515-33	24 – 31	R67, F R11, Xn R65, Xi R38, N R51/53	Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411
ACETONE			
CAS. 67-64-1 EC. 200-662-2 INDEX. 606-001-00-8 Reg. no. 01-2119471330-49	19 - 25	R66, R67, F R11, Xi R36	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
Distillates (petroleum), light fraction hydrotreated			
CAS. 64742-47-8 EC. 265-149-8 INDEX. 649-422-00-2	9,5 – 15,5	Xn R65, Note 4	Asp. Tox. 1 H304, Note 4
1,2-DICHLOROPROPANE			
CAS. 78-87-5 EC. 201-152-2 INDEX. 602-020-00-0 Reg. no. 01-2119557878-16	0,9 - 5	F R11, Xn R20/22	Flam. Liq. 2 H225, Acute Tox. 4 H302, Acute Tox. 4 H332
NAPHTA (PETROLEUM), HYDROTREATED LIGHT			
CAS. 64742-49-0 EC. 265-151-9 INDEX. 649-328-00-1	0,1 - 1	R67, F R11, Xn R65, Xi R38, N R51/53, Note P	Flam. Liq. 2 H225, Repr. 2 H361f, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411, Note P
N-HEXANE			
CAS. 110-54-3 EC. 203-777-6 INDEX. 601-037-00-0	0,05 - 0,1	Repr. Cat. 3 R62, R67, F R11, Xn R48/20, Xn R65, Xi R38, N R51/53	Flam. Liq. 2 H225, Repr. 2 H361f, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.
T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

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.

For symptoms and effects caused by the contained substances, see chap. 11.

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, away from any combustion sources.

7.3. Specific end use(s).

Both for consumer and professional user:
• Keep away from heat, sparks, flames
• Do not use on hot surfaces or exposed to sunlight
• Do not breathe spray / vapors
• Avoid contact with eyes, skin, clothing
• Do not eat, drink or smoke during use
• Do not use in confined spaces and / or limited
• Avoid overuse of the product to avoid creating accumulations of flammable gas in the air
• Use at a distance of 20 cm from the surface to be treated to prevent leakage in the air
• Spray for short intervals, and make sure the presence of good ventilation after use.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

United Kingdom	EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).
Éire	Code of Practice Chemical Agent Regulations 2011.
OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
TLV-ACGIH	ACGIH 2012

Liquefied petroleum gas
Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH			1000		

ACETONE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	1210	500	3620	1500
OEL	IRL		500		
OEL	EU	1210	500		
TLV-ACGIH			500		750

Predicted no-effect concentration - PNEC.

Normal value for the terrestrial compartment	29,5	mg/kg
Normal value in fresh water	10,6	mg/l
Normal value for water, intermittent release	21	mg/l
Normal value in marine water	1,06	mg/l
Normal value for fresh water sediment	30,4	mg/kg
Normal value for marine water sediment	3,04	mg/kg
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	62 mg/kg				
Inhalation.			VND	200 mg/m3	2420 mg/m3	VND	VND	1210 mg/m3
Skin.			VND	62 mg/kg			VND	186 mg/kg

1,2-DICHLOROPROPANE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	IRL		75		110
TLV-ACGIH			10		

N-HEXANE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	UK	72	20		
OEL	IRL	72	20		
OEL	EU	72	20		
TLV-ACGIH		176	50		

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.

C7 hydrocarbons - n-alkanes, isoalkanes, cyclic
OEL-TWA: 1400 mg / m³.

Distillates (petroleum), light fraction hydrotreated - TLV-TWA (skin): 200 mg/m³ (ACGIH 2013)

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.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
None required.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC 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.

ACETONE - Specific note about DPI
Recommended material for gloves: butyl and natural (latex). Butyl rubber, natural rubber (latex). For protection against splashes: PVC gloves.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid (pressurized)
Colour	red
Odour	characteristic of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	< -50 °C.
Initial boiling point.	< -40 °C.
Boiling range.	Not available.
Flash point.	< -50 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	flammable gas
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	1,8 % (V/V).
Upper explosive limit.	9,5 % (V/V).
Vapour pressure.	Not available.
Vapour density	> 2 (propellente, Aria=1)
Relative density.	0,750 Kg/l
Solubility	soluble in organic solvents
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	> 400 °C.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 1999/13/EC) :	76,09 % - 570,68 g/litre.
VOC (volatile carbon) :	0
Can pressure:	3.2 bar after filling at 20°C

SECTION 10. Stability and reactivity.

10.1. Reactivity.

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

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclical - Reacts violently with strong oxidants. Attacks many plastics.
1,2-DICHLOROPROPANE: decomposes on contact with flames or red hot surfaces. Attacks aluminum alloys and some types of plastics.
ACETONE: decomposes under the effect of heat.

Distillates (petroleum), light fraction hydrotreated - It reacts with strong oxidants causing fire and explosion hazard.

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.

1,2-DICHLOROPROPANE: risk of explosion on contact with: aluminium and metal powders. It may react dangerously with: alkaline metals, alkaline earth metals, sodium amides. Forms explosive mixtures with the air.
ACETONE: risk of explosion on contact with: bromine trifluoride, difluoro dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. Can react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl chloride, chromosulphuric acid, fluorine, strong oxidising agents. Develops flammable gases with nitrosyl perchlorate.

10.4. Conditions to avoid.

Avoid overheating.

ACETONE: avoid exposure to sources of heat and naked flames.

10.5. Incompatible materials.

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

ACETONE: acid and oxidising substances.

The product may generate flammable gases on contact with elementary metals, nitrides, strong reducing agents. It may generate toxic gases on contact with oxidising mineral acids, organic peroxides and hydroperoxides.
It may catch fire on contact with oxidising mineral acids, nitrides, organic peroxides and hydroperoxides, and powerful oxidising agents.

10.6. Hazardous decomposition products.

1,2-DICHLOROPROPANE: hydrochloric acid.
ACETONE: ketenes and other irritating compounds.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.
Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.
Vapour inhalation may moderately irritate the upper respiratory trait. Contact with skin may cause slight irritation.
Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.
Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Vapour inhalation may slightly irritate the upper respiratory trait. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.
This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

PETROLEUM GAS - The substance can be absorbed into the body by a loss inalazione.Causa liquid evaporates very quickly displacing the air and causing a serious risk of suffocation when in chiusi.Una Rapid evaporation of the liquid may cause frostbite.
The substance may cause effects on the central nervous system.
ACUTE HAZARDS / SYMPTOMS
INHALATION Drowsiness. Unconsciousness.
SKIN ON CONTACT WITH LIQUID: FREEZING.
EYE CONTACT WITH LIQUID: FREEZING.

C7 hydrocarbons - n- alkanes, isoalkanes , cyclic
The substance can be absorbed into the body by inhalation of its vapor and by ingestion .
INHALATION RISK: A harmful contamination of the air will be reached rather slowly evaporation of this substance at 20 ° C.
EFFECTS OF SHORT- TERM EXPOSURE: The substance is irritating to the eyes and skin. The vapor is irritating
for the eyes , the skin and the respiratory tract. If this liquid is swallowed, aspiration into the lungs can lead to pneumonia chemistry. The substance may cause effects on the central nervous system.
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE : The liquid defats the skin. The substance may have effects on the liver, resulting in impaired functions .
ACUTE HAZARDS / SYMPTOMS
INHALATION Torpor . Headache .
SKIN Dry skin .
EYES Redness . Pain .
Ingestion Abdominal cramps . Burning sensation. Nausea . Vomiting.
NOTES The odor is not a sufficient warning of exceeding the exposure limit.

N-HEXANE: the chronic toxic effect involves the peripheral and central nervous system; this is also affected by an acute effect. Irritating effect is observed on the respiratory apparatus, conjunctivae and skin.

1,2-dichloropropane: the substance can be absorbed into the body by inhalation and ingestion. A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 ° C.
SHORT-TERM EXPOSURE: the substance is irritating to the eyes, the skin and the respiratory tract.
The substance may cause effects on the central nervous system.
LONG-TERM OR REPEATED EXPOSURE: The liquid defats the skin. the substance may have effects on the liver and kidneys.
ACUTE HAZARDS / SYMPTOMS
INHALATION - Cough. Dizziness. Drowsiness. Headache. Sore throat.
SKIN - Dry skin. Redness. Pain.
EYES - Redness. Pain.
INGESTION - Abdominal pain. Diarrhea. Drowsiness. Headache. Nausea. Vomiting.

ACETONE - Symptoms for exposure to the substance may include: irritates the respiratory tract; High doses nausea, headache, confusion, dizziness, stupor to coma with miosis areagente. Possible liver and kidney damage. Irritating, may cause corneal damage. Irritating, for prolonged contact dermatitis can be determined.
Oral Toxicity: The consumption of 50 ml is in the throat only a feeling scorching. Consummation of higher amounts leads to gastroenteritis and drugging with possible damage to the liver and kidney.
Inhalation toxicity: acetone vapors cause irritation and dizziness. The persistence in the environment in which the concentration amounted to 2,000 ppm because already the first symptoms of narcosis which is manifested by symptoms of drunkenness, severe intoxication due to inhalation irritation, drooling,

redness of the face and loss of consciousness . Threatened by damage to the kidney and liver.
Skin contact: Irritating to prolonged or repeated contact, may be determined dermatitis.
Eye Contact: Irritating, burning, can cause corneal damage. Normally you have transient irritation, severe damage to the cornea is described sporadically.
Target organ systemic toxicity - single exposure: may cause drowsiness or dizziness.
Target organ systemic toxicity - repeated exposure: may cause irreversible damage to the central nervous system (solvent-induced neurotoxicity). Injury to the liver and kidneys may occur. The substance may cause effects on the blood and bone marrow.
Allergy (Guinea pig) - fails.
Germ cell mutagenicity - Genotoxicity in vitro tests did not show mutagenic effects.
Mutagenicity: Salmonella typhimurium - negative; Escherichia coli - negative.
Germ cell mutagenicity: fail.
Genotoxicity in vivo (mouse) - fails.
Carcinogenicity: animal experiments have shown the non-carcinogenic.
Reproductive toxicity: no effect on reproduction; no deterioration of the reproductive capacity of the animals.

C7 hydrocarbons - n-alkanes, isoalkanes, cyclic
LD50 (Oral). 8 mg/kg Rat
LD50 (Dermal). 4 mg/kg Rat
LC50 (Inhalation). 23,3 mg/l/4h Rat

N-HEXANE
LD50 (Oral). 5000 mg/kg Rat
LD50 (Dermal). 3000 mg/kg Rabbit

1,2-DICHLOROPROPANE
LD50 (Oral). 1900 mg/kg ratto
LD50 (Dermal). 8750 mg/kg ratto

ACETONE
LD50 (Oral). 5800 mg/kg Rat
LD50 (Dermal). 7400 mg/kg Rabbit
LC50 (Inhalation). 21,09 mg/l/8h Rat

With regard to the mix:
ATE(mix) oral = 83.057,9 mg/kg
ATE(mix) dermal = 0,0 mg/kg
ATE(mix) inhal = 65,6 mg/l/4 h
The product, if brought into contact with the skin it causes significant inflammation with erythema, scabs, and edema.
If brought into contact with the eyes, it causes considerable irritation which can last for over 24 hours.
Specific target organ toxicity (STOT) single exposure: attention, the vapors may cause drowsiness and dizziness.

Distillates (petroleum)
ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its vapor and by ingestion .
INHALATION RISK: There can be no indication of the speed with which it reaches an harmful contamination of the air by evaporation of this substance at 20 ° C.
EFFECTS OF SHORT-TERM EXPOSURE: The vapor ' slightly irritating to the eyes . The substance may have effects on the central nervous system. Exposure to high concentration of vapor can lead to a state of unconsciousness. If this liquid is swallowed , aspiration into the lungs may result in chemical pneumonitis.
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE : The liquid defats the skin.
ACUTE HAZARDS / SYMPTOMS
Inhalation Dizziness . Headache . Drowsiness. Nausea . Unconsciousness.
SKIN Dry skin .
EYES Redness .
Ingestion Cough. Diarrhea. Sore throat. Vomiting. (Further see Inhalation).
NOTES This is a mixture of C10 -C14 naphthenes, iso - and n-paraffins . Neither the concentration of aromatics nor of hexane is greater than 0.1% by volume . Depending on the raw materials and production processes , the composition and the physical properties of this solvent can vary considerably. The symptoms of chemical pneumonitis do not manifest until a few hours or a few days and they are aggravated by physical effort.

SECTION 12. Ecological information.

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity.

Liquefied petroleum gas
EC50 - for Crustacea.
14,22 mg/l/48h daphnia magna

C7 hydrocarbons - n-alkanes, isoalkanes, cyclic
LC50 - for Fish.
> 134 mg/l/96h Oncorhynchus mykiss (trota arcobaleno)
EC50 - for Crustacea.
12 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants.
> 10 mg/l/72h Pseudokirchnerella subcapitata

ACETONE
LC50 - for Fish.
5540 mg/l/96h Oncorincus mykiss, Salmo gairdneri
EC50 - for Crustacea.
8800 mg/l/48h Daphnia pulex
Chronic NOEC for Crustacea.
2212 mg/l Daphnia magna/28d
Chronic NOEC for Algae / Aquatic Plants.
3400 mg/l Chlorella pyrenoidosa/48 h

1,2-dichloropropane
Toxicity to fish
- LC50 Pimephales promelas, 96h = 127 mg / l
Toxicity to daphnia and other aquatic invertebrates
- Daphnia magna EC50, 24h = 11.5 mg / l.

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.
The paraffinic hydrocarbons fraction may be considered biodegradable in water and in air. They distribute mostly in the air. The small non biodegradable amount which spreads into water tends to accumulate in fish.

ACETONE - Biodegradability: 90%, 28 days. Easily degradable.
Theoretical oxygen demand (ThOD): 84%, 5 days. Activated sludge: 100%, 4 days.

12.3. Bioaccumulative potential.

Liquefied petroleum gas
Partition coefficient: n-octanol/water.
< 2,8 -

ACETONE
Partition coefficient: n-octanol/water. -0,24 -
BCF. 3

12.4. Mobility in soil.

ACETONE - Media volatilization from water (Henry constant = 1.4 Pa · m3 / mol at 20 ° C). Disperses by evaporation or dissolution within a day.
Based on the defined value Koc (absorption coefficient of the ground) = 1, it is assumed very high mobility within the soil.

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.

ACETONE - Significant risk of reduction in the oxygen content in the water. Water hazard class 1 (German Regulation, self-assessment): slightly hazardous.

SECTION 13. Disposal considerations.

The valid EEC waste code are largely source-related; the manifacturer is, therefore, unable to specify waste code for products used in various sectors.
CER-code (suggested):16 05 04 .

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.
Avoid littering. Do not contaminate soil, sewers and waterways.
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.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations.These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class:	2	UN:	1950
Packing Group:	-		
Label:	2.1		
Nr. Kemler:	--		
Limited Quantity.	1 L		
Tunnel restriction code.	(D)		
Proper Shipping Name:	AEROSOLS		

Carriage by sea (shipping):

IMO Class:	2.1	UN:	1950
Packing Group:	-		
Label:	2.1		
EMS:	F-D, S-U		
Marine Pollutant.	NO		
Proper Shipping Name:	AEROSOLS		

Transport by air:

IATA:	2	UN:	1950

Packing Group:	-		
Label:	2.1		
Cargo:			
Packaging instructions:	203	Maximum quantity:	150 Kg
Pass.:			
Packaging instructions:	203	Maximum quantity:	75 Kg
Special Instructions:	A145, A167, A802		
Proper Shipping Name:	AEROSOLS		

SECTION 15. Regulatory information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

Seveso category. 8

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

Contained substance.

Point.	28-29	Liquefied petroleum gas Reg. no.: 01-211948657-22

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisarion (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.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

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

Flam. Gas 1	Flammable gas, category 1
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Press. Gas	Pressurised gas
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H361f	Suspected of damaging fertility.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R11	HIGHLY FLAMMABLE.
R12	EXTREMELY FLAMMABLE.
R20/22	HARMFUL BY INHALATION AND IF SWALLOWED.
R36	IRRITATING TO EYES.
R38	IRRITATING TO SKIN.
R48/20	HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED

	EXPOSURE THROUGH INHALATION.
R51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
Repr. Cat. 3	Reproductive toxicity, fertility, category 3.
R62	POSSIBLE RISK OF IMPAIRED FERTILITY.
R65	HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
R66	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

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. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
9. The Merck Index. - 10th Edition
10. Handling Chemical Safety
11. Niosh - Registry of Toxic Effects of Chemical Substances
12. INRS - Fiche Toxicologique (toxicological sheet)
13. Patty - Industrial Hygiene and Toxicology
14. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
15. ECHA website

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.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.