CGV450LGASEX-CGV120LA

MATERIAL SAFETY DATA SHEET
In accordance to CE n° 1907/2006 (REACH)

Date of issue: **04.06.2013** Revision n° **3** - **01.07.2019**

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

1.1. Product identification

Product name: **CGV450LGASEX** – 450 gr., 860 ml – **CGV120LA** – 60 gr., 110 ml

Chemical description: odorized mixture of combustibile gases in the liquid state, under pressure

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

Combustible gas cartridge for welding and filling of professional and household portable appliances. Professional use.

1.3. Details of the supplier of the safety data sheet

Company: PROVIDUS S.r.l.
Address: Corso Piemonte 20 - 10088 - Volpiano (TO) - Italiy
Telephone: +39.011.9882245
Fax: +39.011.9953239
E-mail: info@providusit.com Dr. RAVIOLO Marco

1.4. Emergency telephone number

Centro Antiveleni di Milano - Ospedale di Niguarda Cà Granda: +39.02.66101029 (Poison Control Center – Milan – Niguarda Cà Granda Hospital)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flammable gases, hazard class 1; H220
Gas under pressure: liquefied gas; H280

2.2. Label elements

Hazard pictograms:



Warnings: Hazard

Hazard statements:	H220	Extremely flammable gas.
Precautionary statements:	P102	Keep out of reach of children.
	P210	Keep away from heat/sparks/open flames/hot surfaces or other ignition sources. No smoking.
	P377	Leadking gas fire. Do not extinguish unless leak can be stopped safely.
	P381	Eliminate all ignition sources if safe to do so.
	P403	Store in a well ventilated place.

Derogation from labelling requirements:
Mixtures containing liquefied petroleum gas placed on the market as cartirdges conforming to the EN 417 Standard («Non-refillable metalllic cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances; construction, inspection, testing and marking») are labelled only with the appropriate pictogram, the hazard indications and safety advice concening flammability.

2.3. Other hazards

- Vapours may form an explosive mixture with air, specially if in confined areas .
- The build-up of vapours in confined areas can cause suffocation due to the decrease in oxygen concentration.
- Vapours are invisible even if the liquid expansion produces mist in presence of wet air.
- LPG vapours are heavier than air and tend to drop to ground and stratify.
- Contact with the liquid phase of the product with skin and eyes can result in frostbite.
- The product combustion releases CO2 (carbon dioxide) which is an asphyxiant gas; decrease in oxyen concentration (due to insufficient ventilation/fumes exhaust) can also release CO (carbon monoxide), which is an extremely toxic gas.
- If containers are strongly heated (e.g. in case of fire), this may result in a strong increase in volume and pressure of the liquid contained inside and containers may explode.

The substances constituting the product do not meet the PBT or vPvB classification criteria according to Annex XIII to the EC Regulation n° 1907/2006 (REACH).

SECTION 3: Composition/information on ingredients

3.1. Substances

EC name	CAS N°	EC N°	INDEX N°	Registration N°	CLP Regulation	% p/p
Liquefied petroleum gas[1] (propane, isobutane, n-butane)	68476-85-7	270-704-2	649-202-00-6	01-2119486557-22[2]	Flam. Gas 1; H220 Press. Gas; H280	70 – 85
Propilene	115-07-1	204-062-1	601-011-00-9	Not available	Flam. Gas 1; H220 Press. Gas; H280	15 - 25
Pentane	109-66-0	203-692-4	601-006-00-1	Not available	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3: H336 Aquatic Chronic 2; H411	2

[1]Classification as a carcinogenic or mutagenic product is not required since the substance contains 1,3-butadiene in a percentage lower than 0,1%

[2]Liquefied petroleum gas is exempted from the obligation of registration according to Annex V, item 10 of EC Regulation n° 1907/2006 (REACH). The registration number 01-2119486557-22 corresponds to the "Hydrocarbons, C3-4" identifier. Alternatively, the supplier of liquefied petroleum gas may have registered its constituents: n-butane (01-2119474691-32), isobutane (01-2119485395-27) and propane (01-2119486944-21).

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation (gaseous phase): Move victim away from source of exposure and into fresh air. If respiratory symptoms ascribed to inhalation of vapours develop, seek medical attention immediately. In case of difficulties in breathing, apply artificial respiration.

Contact with skin (liquid phase): Carefully remove contaminated clothing. Flush affected skin with plenty of water. Seek medical attention so that the victim can be treated for possible frostbite.

Contact with eyes (liquid phase): Flush with plenty of water keeping the eylids well open. Seek medical attention immediately.

Ingestion: Ingestion is not considered a predictable route of exposure.

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

Inhalation of vapours can cause depression of the central nervous system, with symptoms like drowsiness, dizziness, blurred vision and arrhythmia. Contact with the rapidly evaporating liquid results in frostbite.

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

For indications on the possible need to seek medical attention and/or special treatments, please refer to SECTION 4.1. Symptoms connected with the

inhalation of vapours may develp at a later time after the exposure. Show the doctor the product label and/or the product safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Fire of small entity or involging the transport means can be extinguished with appropriate extinguishers suitable for Class C fire (e.g. chemical powder or carbon dioxide). Do not use full-jet water or foam.

5.2. Special hazards arising from the substance or mixture
The product is a highly flammable gas under pressure. In case of fire, gas container(s) can explode and generate irritant fumes and toxic gases (carbon monoxide) and ejection of metallic fragments. Vapours can form explosive mixtures with air. Vapours are heavier than air and tend to drop and stratify near the ground.

5.3. Advice for firefighters
Evacuate and isolate the area. Only well trained personnel must have access to the area. In case of fire due to gas leakage, do not extinguish the fire unless leak can be stopped safely. It is better to fight an ignited gas release fire than a gas cloud expanding towards an ignition source. Large ignited gas releases which cannot be extinguished by stopping the gas flow must be kept under control with the use of fractional jet hydrants; this for decreasing the concentration of possible gas clouds. Ask for firemen intervention if you are not sure to extinguish the fire shortly and with the available fire exstinguishing media. Cool down containers exposed to fire with atomized water so to avoid overheating and explosion of containers. Fire fighters must always werar appropriate individual protection equipment (helmet, fire-proof gloves and self-contained, positive-pressure, breathing apparatus with face shield) [ref. EN 469]. Prevent contaminated extinction water from flowing into drains or rivers.

SECTION 6: Accidental release measures

6.1. Personal precautions, personal equipment and emergency procedures
Evacuate and isolate the area. Only well trained personnel must have access to the area. Remove any ignition sources if this can be be done safely. Try to contain product release at source if this can be done safely. Ensure proper ventilation. Do not inhale vapours and avoid contact of the liquid with skin and eyes. Warn the authorities according to what provided for by the emergency plan.

For personnel not intervening directly:	Use adequate personal protective equipment (please refer to SECTION 8.2).
For personnel intervening directly:	Use adequate protection equipment (please refer to SECTION 8.2). In case of intervention in areas where gas presence is high (e.g. confined areas), use a self-contained, positive-pressure breathing apparatus. Work windward, if safe to do so. Use fractioned-jet hydrants also in order to decrease the concentration of possible gas clouds below the lower limit of explosivity. Prevent gas from spreading into low-lying areas, since gas vapours density is higher than air and vapours tend to stratify near the ground. Orient containers in such a way to prevent liquid from flowing out if safe to do this.

6.2. Environmental precautions
Limit product flowing out as much as possible. Prevent the product from spreading into environment and flowing to sewage system, surface water and groundwater. Warn authorities in case of large spillage into drains or waterways.

6.3. Methods and materials for containment and cleaning up
If the product has not volatized, soak up residuals with inert material (e.g. sand, meerschaum/sepiolite, concrete or sawdust) and store in a properly labeled container. Only use anti-sparking tools. DO NOT use electrical equipment/tools which are not provided with an explosion-proof system. Temporarily store the product residuals in open air before conveying them to the waste disposal system. Wash the involved area with water in order to eliminate the residual contamination.

6.4. Reference to other sections
For information on the personal protective equipment, please refer to SECTION 8. For information on eco-toxicological properties of the product, please refer to SECTION 12. For information on product disposal, please refer to SECTION 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Product handling operations are to be carried out only by qualified personnel, well trained on the specific risks connected with this operation and on the safety precautions to take. Ensure proper ventilation. Do not inhale vapours and avoid contact of the liquid with skin and eyes. Wear appropriate

personal protective equipment (please refer to SECTION 8.2). Only use anti-sparking tools. DO NOT use electrical equipment/tools that are not provided with an explosion-proof system. Keep away from heat sources, hot surfaces, sparks, open flames and any other ignition source. No smoking. Provide grounding of containers, pipes and equipment. Avoid the build-up of electrostatic charges. DO not pierce/burn containers even if empty after use. Do not spray on open flames or on any other ignition source. DO not eat, drink while using the product. After use, carefully wash your hands as well as the other areas of the skin exposed to the product. Periodically wash work clothing and personal protective equipment to remove contaminants.

7.2. Conditions for safe storage, including any incompatibilities

Store the product exclusively in the original, well-closed container. Store in a dry, cool and well ventilated place. Protect from sun rays and do not expose to temperatures over 50 °C. Keep away from heat sources, hot surfaces, sparks, open flames or any other ignition sources. No smoking. Provide grounding of containers, pipes and equipment. Avoid the build-up of electrostatic charges. Keep away from incompatibile materials (please refer to SECTION 10.5).

7.3. Specific end use(s)

Uses other than those indicated in SECTION 1.2 are strongly discouraged. Carefully read the instructions for installing the cartridge before using it. Storage and handling of the product intended for the use of gas cartridge and the relevant container must meet the reference standards covering the transport of hazardous goods and, in a special way, the packing instructions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Build-up of vapours in confined areas can cause asphyxia because of oxygen deficiency. Keep oxygen concentration over 17% (normal value = 20,9%). Also refer to the occupational exposure limits indicated below.

Propilene	ACGIH – TWA (8 hours)	= 500 ppm
Pentane	OEL (ITA) – TLV (8 hours)	= 667 ppm; 2000 mg/m3
	OEL (UE) – TLV (8 hours)	= 1000 ppm; 3000 mg/m3
	ACGIH – TWA (8 hours)	= 600 ppm
1,2 Dichloroproane	ACGIH – TWA (8 hours)	= 75 ppm
	ACGIH – STEL (15 minutes)	= 110 ppm
Carbon monoxide	ACGIH - TWA (8 hours)	= 25 ppm

8.2. Exposure controls

The use of personal protective equipment is to be made after assessing the risks in accordance with the requirements of the Legislative Decree n° 81/2008. In any case, please consult your supplier before you make a final decision on the protective equipment to adopt.

Skin protection:	Wear full work clothing (appropriate to cover also upper and lower limbs) showing antistatic and fire-proof characteristics [ref. EN 340 Standard].
Hand protection:	Wear antistatic, high-abrasion resistant gloves to protect yourselves against the mechanical risks. [ref. EN 388 Standard]. In case of thermal risk (frostbite) due to jets of liquid product, wear thermoinsulated gloves [ref. EN 511 Standard]. Immediately replace contaminated or broken gloves.
Eye protection:	Wear safety goggles with protection. In case of thermal risk (frostbite) due to jets of liquid product, wear a face shield or a visor for splash protection [rif. EN 166].
Respiratory protection:	In case of insufficient ventilation, wear a full face mask with filter for organic vapours [ref. EN 136 Standard]. In case of intervention in areas where gas presence is high /e.g. confined areas), wear a self-contained respiratory apparatus [ref. EN 529].
Environmental protection:	Operate in compliance with the standard in force (Legislative Decree n° 152/2006).
Tech. & hygiene measures:	Plan a localized ventilation through suction or other appropriate devices in order to keep particles in the air below the recommended exposure limit. Do not eat, drink or smoke while using the product. After use, wash your hands and the other areas of the skin exposed to the product. Periodically wash the work clothing and the personal protective equipment to remove contaminants.

SECTION 9: Physical and chimica properties

9.1. Information on basic physical and chimica properties

a) Aspect:	colourless liquid under pressure (gas at 15.6 °C and 1 bar)
b) Odour:	typical to odorized combustibile gases
c) Odour threshold:	n-butane: 2.9 - 14.6 mg/m^3 propilene: 39.6 – 116.27 mg/m3
d) Ph:	not applicable due to the product characteristics
e) Melting point/freezing point:	< 0 °C
f) Initial boiling point and boiling interval:	-44 °C
g) Flammability point:	n-butane: -60 °C isobutane: -82°C propane: -104,4 °C propilene: -108 °C
h) Evaporation rate:	evaporates quickly into atmosphere and causes abrupt cooling of the surfaces with which it comes into contact
i) Flammability (solids, gas):	extemely flammable gas (at 20 °C and 101.3 kPa)
j) Flammability or explosivity limit, upper/lower:	gas/air mixture can explode, if gas concentration lies between the lower limits (LIE) and the upper limits (LSE) of explosivity n-butane: LIE = 1.8% --- LSE = 8.4% isobutane: LIE = 1.8% --- LSE = 9.8% propane: LIE = 2.2% --- LSE = 10% propilene: LIE = 2,4% --- LSE = 10.3%
k) Vapour pressure:	n-butane: 1820 mmHg at 25 °C isobutane: 2611 mmHg at 25 °C propane: 7150 mmHg at 25 °C
l) Vapour density:	n-butane: 2.07 (air=1) isobutane: 2.07 (air=1) propane: 1.56 (air=1) propilene: 1.49 (air =1)
m) Relative density:	n-butane: 0.6 (water=1) isobutane: 0.6 (water=1) propane: 0.5 (water=1)
n) Solubility:	in water: n-butane: 61.2 mg/l at 25 °C isobutane: 48.9 mg/L at 25 °C propane: 62.4 ppm at 25 °C propylene: 200 mg/L a 25°C soluble in ether and chloroform
o) Partition coefficient/n-octanol/water:	log Kow = 1.77 - 2,89
p) Auto-ignition temperature:	not tested on the product
q) Decomposition temperature:	not tested on the product
r) Viscosity:	n-butane: 0.30 cSt a 20 °C (liquid) propane: 0.20 cSt a 20 °C (liquid)
s) Explosive properties:	vapours may form explosive misture with air
t) Proprietà ossidanti:	not oxidizing

9.2. Other information

u) Critical temperature:	n-butane: 153.2 °C isobutane: 134.69 °C propane: 96.81 °C propilene: 91.8 °C
v) Critical pressure:	butane: 35.7 atm isobutane: 35.82 atm propane: 42.01 atm propilene: 45.6 atm

SECTION 10: Stability and reactivity

10.1. Reactivity
No special risks of reactivity with other substances under normal use and storage conditions.

10.2. Chemical stability
The product is stable under normal use and storage conditions.

10.3. Possibility of hazardous reactions
Vapours may form explosive mixtures with air, specially in confined areas. Contact with strong oxidants (hypochlorites, nitrates, perchlorates, permanganates and dichromate) and halogens may cause highly exothermic reactions and result in explosion. The product can also react violently with oxidizing substances (peroxides, chlorine dioxide, nitrogen dioxide). Strong heating of the containers (e.g. in case of fire) results in a strong increase in volume and pressure of the liquid and this may cause the container to explode.

10.4. Conditions to avoid
Do not expose to sun rays and temperatures higher than 50 °C. Avoid contact with heat sources, hot surfaces, sparks, open flames and any other ignition sources. Avoid the build-up of electrostatic charges. Do not pierce/burn containers) even after use. Do not vaporize on open flames or other ignition source. Avoid contact with incompatible materials (please refer to SECTION 10.5).

10.5. Incompatible materials
Oxidants, halogens and oxidizing substances.

10.6. Hazardous decomposition products
Thermal decomposition may result in the release of CO2 (carbon dioxide), asphyxiating gas and CO (carbon monoxide), which is a highly toxic gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
No test data on the product. Set out below is the information available on the toxicological effects of its major constituents ("LPG" and "acetone").

a) Acute toxicity
Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure and can form explosive mixtures with air. Therefore, experiments on possible effects of acute toxicity by oral and dermal routes are considered to be neither practical nor important.
Inhalation (rat - M/F) → LC_{50} (15 minutes) = 800000 ppm ; = 14442738 mg/m^3 = 1443 mg/l [data on propane].
Inhalation (man – general population) → A concentration equal to 100,000 ppm (10%) caused slight irritation to eyes, nose and respiratory tract as well as mild dizziness in a few minutes.

b) Skin corrosion/irritation
Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure and can form explosive mixtures with air. Therefore, experiments on possible effects of skin corrosion/irritation are considered to be neither practical nor important. Dose-response studies carried out on humans have pointed out that propane and butane are not irritant/corrosive to skin and mucous membranes. Contact of the liquefied gas with the skin can result in frostbite.

c) Serious eye damage/serious eye irritation
Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure and can form explosive mixtures with air. Therefore, experiments on possible effects of corrosion/irritation to the eyes are considered to be neither practical nor important. Contact of the liquefied gas with eyes can result in frostbite.

d) Respiratory or skin sensitisation
Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure and can form explosive mixtures with air. Therefore, experiments on possible effects of respiratory or skin sensitisation are considered to be neither practical nor important.

e) Germ cells Mutagenicity
No known evidence of germ cells mutagenicicy from main components of the liquefied petroleum gas. Furthermore, the product contains less than 0,1% of 1,3-butadiene.
In vitro – Ames test (salmonella typhimurium) → negative [data on propane].
In vivo – Micronucleus test (rat) → negative.

f) Carcinogenicity
No known evidence of carcinogenicity from main components of the liquefied petroleum gas. Furthermore, the product contains less than 0,1% of 1,3-butadiene.

g) Toxicity for reproduction
Most part of the studies conducted did not show toxic effects on fertility and embryo-foetal development.
Inhalation (rat - M/F: 13 weeks., 6 hours/g., 5 days/weeks) → NOAEC = 10000 ppm → no effect on the menstrual cycle, spermatogenesis, sperm count and motility.
Inhalation (rat - M: 2 weeks prior to mating and 28 days (minimum) throughout mating; F, 2 weeks prior to mating, 0-19 days of gestation, 6 hours/days, 5 days./weeks) →
NOAEC (maternal toxicity) = 16000 ppm / 19678 mg/m³ air → no effect of systemic toxicity at the highest-tested concentration [data on ethane].
NOAEC (developmental toxicity) = 16000 ppm / 19678 mg/m³ air → no effect on development [data on ethan].

h) Specific target organ toxicity (STOT) — single exposure
No STOT effect due to single exposure are known for the product.

i) Specific target organ toxicity (STOT) — repeated exposure
Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure and can form explosive mixtures with air. Therefore, experiments on possible effects of chronic toxicity by oral and dermal routes are considered to be neither practical nor important.
During a study conducted thoughout a 6-week period on male and female rats no neurological, hematological or clinic effects have been observed. At doses equal to 12,000 ppm, male animals have shown a 25% decrease in weight during the first week of exposure (LOAEC = 12.000 ppm / 21.641 mg/m3) [data on propane].

j) Hazard in case of aspiration
Not applicable to the product.

k) Toxicokinetics, metabolism and distribution
Toxicokinetic studies revealed how short-chain alkanes (C1-C4), which at ambient temperature exist in the form of vapour, have a poor absorption potential and, if absorbed, they are rapidly breathed out.

SECTION 12: Ecological information

12.1. Toxicity
No test data on the product. Set out below is the information available on the eco-toxicological effects of its major constituents ("LPG").

Liquefied petroleum gas is highly flammable at ambient temperature and standard pressure; it is formed by gaseous substances which are mainly distributed in air, rather than in water, sediments and soil. These constituents have no adverse effects to acquatic life.

Invertebrates (daphnia magna) → LC_{50} (48 hours) = 14.22 mg/l [data on butane]
Fish → LC_{50} (96 hours) = 24.11 mg/l [data on butane]

12.2. Persistance and degradability
Abiotic degradation: Liquefied petroleum gas can contribute to the ground level ozone formation. However, the photochemical ozone formation depends on a complicated interaction with other atmospheric pollutants as well as on environmental conditions.
Biotic degradation: Studies conducted on a similar substance have revealed 100% biodegradability in 16 days [data on ethane].

12.3. Bioaccumulative potential
Based on the estimated value of the partition coefficient/n-octanol/water of the liquefied petroleum gas (log Pow = 1.09 – 2.8), the product does not bioaccumulate.

12.4. Mobility in soil
Standard absorption tests cannot be applied to the liquefied petroleum gas (UVCB substance). However, at ambient temperature and standard pressure, it is constituted by gaseous substances, which are mainly distributed in air, rather than in water, sediments and soil.

12.5. Results of PBT and vPvB assessment
The substances composing the product do not meet the PBT or vPvB classification criteria enumerated in Annex XIII to EC Regulation n° 1907/2006 (REACH).

12.6. Other adverse effects
Liquefied petroleum gas can contribute to the ozone formation in atmosphere.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
The product gives dangerous properties to the waste containing LPG residuals because of gas flammability and possibility to form explosive atmospheres. It is therefore compulsory to take all the required measures and precautions to avoid dispersing the product in air. Do not dispose of the product into the sewerage system, in the environment or through waste water. Do not puncture or incinerate the container(s). The product and contaminated containers must be disposed of in compliance with the Legislative Decree n° 152/2006 through qualified and authorized facilities for the treatment of flammable waste. Potentially applicable CER Code: 16 05 04 "gas in containers under pressure (Halons included), containing hazardous substances".

SECTION 14: Transport information

The product is subject to the provisions of the law in force for transport of dangerous goods by road/rail (ADR/RID), sea (IMDG Code) and air (ICAO/IATA).

14.1. UN number
ADR/RID: 2037
IMDG Code: 2037
ICAO/IATA: 2037

14.2. UN proper shipping name
ADR/RID: Small-capacity receptacles containing gas (gas cartridges), without a release device, non-refillable → non-refillable cartridge containing gas under pressure.
IMDG Code: Small-capacity receptables containing gas (gas cartridges), without a release device, non-refillable → non-refillable cartridge containing gas under pressure.

ICAO/IATA: Small-capacity receptacles containing gas (gas cartridges), without a release device, non-refillable → non-refillable cartridge containing gas under pressure.

14.3. Transport hazards class(es)
ADR/RID: 2
IMDG Code: 2
ICAO/IATA: 2.1

14.4. Packing group
ADR/RID: -
IMDG Code: -
ICAO/IATA: -

14.5. Environmental hazards
ADR/RID: -
IMDG Code: The product is not a marine pollutant
ICAO/IATA: -

14.6. Special precautions for user

ADR/RID: Classification code: 5F
Hazard label: 2.1
IMDG Code: Hazard label: 2.1
EMS Number: F-D, S-U
ICAO/IATA: Hazard label: 2.1
Packing instructions: Y203 (limited quantities)
Packing instructions: 203
ERG: 10L
EQ: E0

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

ADR/RID: -
IMDG Code: -
ICAO/IATA: -

SECTION 15: Regulatory information

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

- Legislative Decree n° 81/2008 – consolidated law on safety in workplaces
- Legislative Decree n° 152/2006 – protection of water (Title III) and waste (Title IV)
- Legislative Decree n° 334/99 – control of major-accident hazards involving given dangerous substances

The product does not contain:

- Substances of very high concern (SVHC) subject to authorisation
- Substances of very high concern (SVHC) subject to authorization procedure (Annex XIV)
- Substances subject to restriction procedure (Annex XVII)

According to EC Regulation n° 1907/2006 (REACH).

15.2. Chemical safety assessment

No evaluation on the chemical safety of the product has been carried out.

SECTION 16: Other information

Revision of the Safety Data Sheet:
The previous version of this document was updated according to the dispositions provided for by Annex II to EC Regulation CE n° 1907/2006 (REACH), as amended by the (EU) Regulation 2015/830 dated May 28, 2015.

Full text of hazard statements (H) cited at SECTION 2 and SECTION 3:

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapor
H280 Contains gas under pressure, may esplode if heated.
H302 Harmful if swallowed.
H304 It can be fatal if swallowed and enters airways
H319 It causes serious eye irritation.
H332 Harmful if inhaled
H336 May cause drowsiness or dizziness
H411 Toxic to aquatic life with long lasting effects

Main literature reference and data source:

- EC Regulation n° 1272/2008 (CLP) (and subsequent amendments and adaptations)
- EC Regulation n° 1907/2006 (REACH) (and subsequent amendments and adaptations)
- SDS raw materials suppliers

Acronimi:

ACGIH:	American conference of governmental industrial hygienists
ADR:	European agreement concerning the International carriage of goods by road
CAS:	Chemical abstracts service
CER:	European Waste Catalogue
CLP:	Classification, labelling and packing
EINECS:	European inventory of existing chimical substances
IATA:	Internation Air Transport Association
ICAO:	International Civil Aviation Organisation
IMDG Code:	International Maritime Dangerous Goods
LC:	Letal concentration
LOAEC:	Lowest observable adverse effect concentration
NOAEC:	No Observed Adverse Effect Concentration
PBT:	persistent, bioaccumulative, toxic
REACH:	registration, evaluation, authorization and restriction of chemicals
RID:	regulation concerning the international carriage of goods by rail
STEL:	Short-term exposure limit
TLV:	Threshold limit value
TWA:	Total weight average
vPvB:	Very persistent, very bioaccumulative

Remarks:
The information given in this Safety Data Sheet is based on our current knowledge at the date of its publication. Information is provided with the unique purpose of facilitating the use, storage, transport and disposal of the product and it is not to be considered a specific warranty regarding the quality. The user must ensure the suitability and completness of the information provided in connection with the special use of the product.