

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

1.1	Product identification	
	Denomination	Liquefied petroleum gas Propane/Butane 330 g Propane/Butane 210 g Butane/propane 210 g Butane/propane 425 g Butane/propane 190 g
	Registration No.	01-2119486557-22-XXXX
		Liquefied petroleum gas is exempted from registration according to Annex V, item 10 of EC Regulation No. 1907/2006. The registration number 01-2119486557-22 corresponds to the identification number "Hydrocarbons, C3-4". 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).
1.2	Identified pertinent uses of the substance or compound and uses not recommended	
	Description/use	Combustible gas cartridge for welding and for reloading portable professional and household tools
1.3	Information on the safety data sheet supplier	
	Company name	OXYTURBO SpA
	Address and state	Via Serio, 15 25015 – Desenzano del Garda (BS) Italy
	Telephone	+39.030.9911855
	Fax	+39.030.9911270
	E-mail of the person responsible for the safety data sheet:	safety@oxyturbo.it
1.4	Emergency telephone number	
	+39.030.9911855 from Monday to Friday - 8:00am to 12:00pm/ 2:00pm to 6:00pm	
	For urgent inquiries refer to: ENGLAND, SCOTLAND (NHS 24) WALES (NHS Direct Wales) - For medical advice contact 111	

SECTION 2: identification of hazards

2.1 Classification of the substance or compound

The product is classified as hazardous pursuant to EC Regulation 1272/2008 (CLP) as amended and updated). The product therefore requires a safety data sheet in compliance with the provisions of EC Regulation 1907/2006 as amended and updated.

Hazard classification and indications:

Flam. Gas 1 H220

Press. Gas H280

Does not contain 1,3-butadiene (<0.1%) (therefore, for classification, note K of Reg. 1272/2008 applies).

The complete text of the hazard indications (H) can be found in section 16 of the safety data sheet.

2.2 Elements of the label

Pictograms



Warning

Hazard indications:

H220

Recommended cautions:

P102

P210

P377

Hazard

Highly flammable gas

Keep out of reach of children.

Keep away from heat sources, hot surfaces, sparks, open flames or other ignition sources. Do not smoke

In the event of fire due to gas leak, do not extinguish unless it is impossible to stop the leak

without danger.
P381 Eliminate all ignition sources in the event of a leak.
P403 Store in a well ventilated place.
P410+P412 Protect from sunlight. Do not expose to a temperature higher than 50°C/122°F.
The hazard indications are simplified pursuant to the exemption provided by Annex 1, Section 1.3.2.1 of EC Regulation 1272/2008.

2.3 Other hazardsPhysical hazards:

The accumulation of vapours in confined environments can form explosive compounds with the air, especially in closed environments.

The strong heating of the container (for example, in the event of a fire) causes a significant increase in volume of the liquid and pressure with the danger of explosion for the container.

Occupational health and safety hazards:

The direct spray of liquid gas on the skin and eyes can cause localised freezing of the skin and the conjunctiva.

The introduction or presence of the gas in confined environments can lead to the risk of asphyxiation. Keep the oxygen concentration above 17% (normal value = 20.9%)

With a lack of oxygen, the combustion of the gas may also be incomplete and in this case the toxic gas carbon monoxide is formed. Inhalation of the gases as they are may lower activity of the central nervous system and therefore lead to drowsiness and dizziness. Possibility of cardiac sensitization (arrhythmia) in the event of elevated exposure.

Hazards for the environment:

As a volatile organic compound (VOC), the gas is subject to photochemical reactions which generate hazardous atmospheric pollutants (ozone, organic nitrates).

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

The product does not contain substances with endocrine disrupting properties in concentration $\geq$ 0.1%.

SECTION 3: Composition/information on the ingredients**3.1 Substances**

Liquefied petroleum gas consisting primarily of a mixture of propane and butane (odorised compound of combustible gases, under pressure in liquid state). The LPG can also contain an odorised tertbutyl mercaptan (TBM)-based product in order to make its presence detectable already at concentrations lower than L.I.E.

Does not contain 1,3-butadiene (<0.1%).

CAS No.	EC No.	EC Index No.	REACH registration no.	Classification
68476-85-7	270-704-2	649-202-00-6	01-2119486557-22-XXXX	Flam. Gas 1 H220, Press. Gas H280

The complete text of the hazard indications (H) can be found in section 16 of the safety data sheet.

SECTION 4: first aid measures**4.1 Description of first aid measures**

- Contact with the eyes: after contact with the liquid phase of the product, wash immediately with water for at least 15 minutes, keeping your eyelid raised. Do not use hot water and do not rub. See your doctor in the event of irritation, watering, altered vision or eye damage.
- Contact with the skin: after contact with the liquid phase of the product, submerge the frozen part in water for about 5 minutes. Do not use hot water and do not rub. In the event of injury to the skin tissue, see your doctor.
- Ingestion: this event is deemed improbable, given the high volatility of the product. Nevertheless, it can cause severe freezing damage to the mucous membrane and the mouth tissue, oesophagus and stomach. In the unlikely event, do not induce vomiting and see a doctor immediately.
- Inhalation: remove the injured person from the hazardous area. If there is an asphyxiating atmosphere and the injured person must be rescued, use the appropriate means of protection. During the rescue, do not use objects that can trigger explosions. Have the injured person breathe fresh air and see a doctor immediately. In case of breathing difficulty, administer first aid. Symptoms connected with the absorption of gases and vapours (drowsiness, blurred vision, any arrhythmia) may be delayed, therefore you must see a doctor immediately as soon as any symptoms of illness appear, taking the product label or safety data sheet.

4.2 Main symptoms and effects, both acute and delayed

Inhalation of vapours may cause depression of the central nervous system, with symptoms such as drowsiness, dizziness, blurred vision and arrhythmia. Prolonged contact with the rapidly evaporating liquid may cause frostbite.

4.3 Indications of the possible need to immediately seek medical attention and special treatments

Symptoms related to vapour inhalation may occur even some time after exposure.

In case of burns, consult a doctor. In case of frostbite involving the eyes, consult a specialised doctor and arrange for immediate hospitalisation.

SECTION 5: fire protection measures**5.1 Means of extinguishing**

Suitable extinguishing media: small fires may be extinguished with extinguishers suitable for class C fires, for example chemical powder or carbon dioxide type fires.

Unsuitable means of extinguishing: full water jet and foam fire extinguishers.

5.2 Special hazards stemming from the substance or the compound

If involved in a fire, the container could explode with the emission of irritating fumes and toxic gases (carbon monoxide) and with the projection of metallic fragments.

Vapours may form explosive air mixtures with air. Vapours have a higher density than air and tend to stratify near the ground.

5.3 Recommendations for firefighting personnel

Never extinguish a fire if you are not sure that you can immediately intercept the gas leak, in other words, if you are not sure that the leaking gas cannot reignite. It is preferable to have an ignited leak, rather than a cloud of gas that spreads toward a source of ignition. Ask the Fire Brigade to respond if you are not certain that you can extinguish the fire in a short amount of time with the available means of extinguishing.

Remember that the product, if leaked, is denser than the air and tends to stay closer to the ground.

Use sprayed water to cool the containers exposed to the fire and to reduce the intensity of the fire.

In the event of a fire, use an approved type self-contained breathing apparatus (EN 137 type), gloves and emergency protection clothing.

SECTION 6: measures in case of accidental spill**6.1 Personal precautions, protection devices and procedures in case of emergency****6.1.1 For non-emergency personnel:**

check for the possibility of explosions (presence of trigger sources, damaged containers), remove ignition sources and ensure adequate ventilation for the rooms. Notify people nearby and particularly those downwind of the gas leak and the danger of fire and the possibility of explosion. Bear in mind that the gas is heavier than the air and therefore tends to settle in a layer on the ground. Activate any other procedures required by the emergency plan.

6.1.2 For emergency responders:

Wear protective clothing (antistatic) and personal protection equipment in order to prevent inhalation and contact with the eyes and skin and follow the emergency procedures (see section 8).

Bear in mind that the gas is heavier than the air and therefore tends to settle in a layer on the ground. The gas in the air may generate an explosive atmosphere even with a minimum ignition source. The containers can also explode when exposed to heat sources.

6.2 Environmental precautions

Prevent from entering sewers, basements and work pits or any place where accumulation can be dangerous. See sections 12 and 13.

6.3 Methods and materials for containment and reclamation

If the product is not volatilized, clean and collect the residues, using absorbent material if necessary (sand, sepiolite, cement, sawdust). Do not use metallic objects for these operations. Leave the contaminated materials outdoors before beginning disposal of waste materials. See sections 12 and 13.

6.4 Reference to other sections

Any information concerning personal protection and disposal can be found in sections 8 and 13.

SECTION 7: handling and storage**7.1 Precautions for safe handling**

The product can generate explosive atmospheres. The containers must be handled with care. Ensure adequate ventilation of the work location or in any case of the location where the gas is used.

Enforce a no smoking policy. Do not vaporise/spray the gas on an open flame or on other incandescent bodies.

Avoid any possibility of physically damaging the container (corrosion, falls, mechanical action).

Check for any gas leaks (water and soap solution) and protect from any ignition sources (flames, sparks, ionising radiation, laser radiation, microwaves, static electricity).

Avoid contact with sprays of compressed and liquefied gas and the eyes and skin. Do not breathe in the gas as it is or the gases stemming from combustion (use PPE indicated in section 8).

Do not eat, drink or smoke during use of the product.

7.2. Conditions for safe storage, including any incompatibilities

Store the gas in the original containers, kept well sealed, in a cool place far from heat (at a temperature lower than 50°C) and far from flames or sparks.

The warehouse locations for combustible gas must be adequately ventilated and separate from oxidising or combusting substance warehouses (oxygen, nitrous oxide), as well as separate from warehouses where incompatible substances indicated in section 10 are stored.

7.3 Specific end uses

Use for purposes other than those indicated in subsection 1.2 is not recommended.

See the technical instructions for safe use of the product. Specifically ensure that you have carefully read the instructions on inserting the cartridge prior to use.

SECTION 8: exposure control/individual protection**8.1 Control parameters**

Occupational exposure limits

State	Threshold limit value			
	TWA/8h		STEL/15min	
	ppm	mg/m ³	ppm	mg/m ³
Australia	1000	1800		
Belgio	1000	1826		
Canada - Québec	1000	1800		
Irlanda	1000	1800	1250	2250
New Zealand	1000	1800		
Singapore	1000	1800		
South Africa Mining	1000	1800	1250	2250
South Korea	1000			
USA - NIOSH	1000	1800		
USA - OSHA	1000	1800		
United Kingdom	1000	1750	1250	2180

8.2 Exposure checks

Professional exposure check

The following means of protection are indicated, with specifications from the manufacturer concerning the protection equipment:

The respiratory system: in the event of insufficient ventilation, wear a full mask (EN 136 type) with a filter for organic vapours or, better yet, a self-contained breathing apparatus (EN 137 type) with a full mask.

Hand protection: Wear anti-static gloves with high resistance to abrasion for protection against mechanical hazards [ref. EN 388]. In the event of thermal risk (frostbite) from a liquid jet, wear cold-insulating gloves [ref. EN 511]. Replace gloves immediately in case of contamination or breakage.

Eye protection: Wear safety glasses with protection. In case of thermal risk (frostbite) from a liquid jet, wear a face shield or visor [ref. EN 166].

Skin protection: Wear full working clothes (suitable to cover also the upper and lower limbs), having characteristics of anti-static and fire resistance [ref. EN 340]).

Environmental exposure check

Operate only in an equipped area with ventilation systems and emergency equipment (extinguishers).

Refer to the current prevailing regulation on environmental pollution - Legislative Decree 03/04/2006 No. 152 as updated and amended

SECTION 9: physical and chemical properties**9.1 Information on basic physical and chemical properties**

a) Appearance	Liquid gas under pressure, gas at 15.6°C and 1 bar.
b) Colour	Colourless.
c) Odour	Characteristic of odourised combustible gases Odour threshold: n-butane: 2.9 - 14.6 mg/m ³
d) Melting point/freezing point	-130 °C
e) Initial boiling point and boiling range	-0.5 °C
f) Flammability (solid, gas)	Flammable gas with air (at 20 °C and 101.3 kPa)
g) Upper/lower flammability or explosive limits	Lower: 1.86 - 2.27 Upper: 8.41 - 9.5
h) Flash point	-74 °C
i) Autoignition temperature	405 °C
j) Decomposition temperature	no unique values available in scientific literature
k) pH at 20°C	not relevant
l) Viscosity	n-butane: 0.30 cSt at 20°C (liquid) propane: 0.20 cSt at 20°C (liquid)
m) Solubility	n-butane: 61.2 mg/l at 25°C propane: 62.4 ppm at 25°C
n) Partition ratio (n-octanol/water)	Log Kow between 2.36 and 2.89
o) Vapour pressure	n-butane: 1820 mmHg at 25°C propane: 7150 mmHg at 25°C
p) Density and/or relative density	n-butane: 0.6 (water=1) propane: 0.5 (water=1)
q) Relative vapour density	n-butane: 2.07 (air=1) propane: 1.56 (air=1)
r) Particle characteristics	Not applicable

9.2 Other information**9.2.1. Information with regard to physical hazard classes****Explosive properties**

vapours can form explosive mixtures with air

n-butane: LIE = 1.8% --- LSE=8,4%

isobutane: LIE= 1.8% --- LSE= 9.8%

propane: LIE= 2.2% --- LSE= 10%

Oxidising properties

non-oxidising

Critical temperature

butane: 153.20 °C

propane: 136.69 °C

Critical pressure

butane: 35.70 atm

propane: 42.01 atm

9.2.2. Other safety characteristics**Evaporation rate**

the liquid evaporates quickly in the atmosphere, causing abrupt cooling of the exposed surfaces

Lipophilicity

soluble in ether, chloroform

SECTION 10: stability and reactivity**10.1 Reactivity**

The bursting or opening of the container due to unsuitable storage conditions can immediately generate an explosive atmosphere (see subsection 10.3). Can react on contact with strong oxidants.

10.2 Chemical stability

The strong heating of the containers triggers their rapid decompression and gas leaks. For handling instructions, see section 7. Also refer to subsection 10.4.

10.3 Possibility of hazardous reactions

Contact with strong oxidising agents (hypochlorite, nitrates, perchlorates, permanganates, dichromate) triggers a strong reaction, can react violently with the combustible substances (peroxides, chlorine dioxides, nitrogen dioxides). Contact with halogens, chlorine, fluorine and acetylene can cause strong exothermic explosive reactions. The addition of nickel carbonyl to the n-butane and oxygen mixture can cause an explosion at 20-40°C.

10.4 Conditions to avoid

Take precautionary measures to avoid exposing the cartridges to direct sunlight and heat sources. Do not expose to temperatures higher than 50°C. Avoid conditions that can cause the containers to corrode and break.

10.5 Incompatible materials

Strong oxidising agents, combustive substances, halogens, chlorine, fluorine and acetylene.

10.6 Hazardous decomposition products

Toxic gases (carbon monoxide) and highly flammable (hydrogen, ethylene) irritating carbon fumes.

SECTION 11: toxicological information**11.1 Information on toxicological effects****a) Acute toxicity:**

The product consists of gases at ambient temperature and pressure for which considerations regarding oral and cutaneous toxicity are not considered relevant.

Below is a summary of the most representative studies. These results do not lead to any classification in the field of hazardous substances legislation.

Method	Result	Comments	Source
By inhalation			
RAT Inhalation	LC50 (15 minutes):800000 ppm (male/female) LC50 (15 minutes):14442738 mg/m3 (M/F) LC50 (15 minutes):1443 mg/l (M/F)	Key study Propane	Clark DG and Tiston DJ (1982)
Studies on humans General Population	Odour is not detectable below 20,000 ppm (2%) and a concentration of 100,000 ppm (10%) produced slight irritation to the eyes, nose and respiratory tract but caused mild dizziness within a few minutes.	Weight of evidence	Anon 1982 Herman (Chairman 1966)

Ingestion: In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations.

Contact with the skin/eyes: In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations.

b) Skin corrosion/skin irritation:

In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations. Some dose-response studies conducted on humans show that propane and butane do not have irritating and corrosive effects on skin and mucous membranes. Contact with liquefied gas can produce frostbite.

c) Serious eye damage/eye irritation:

In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations.

d) Respiratory or skin sensitisation:**Respiratory sensitisation**

No studies indicating this type of effect are available.

Skin sensitisation

In accordance with point 2 of Annex XI of the REACH regulation, this study should not be conducted.

e) Mutagenicity on germ cells:

No evidence of genotoxicity for the major components of LPG. In addition, the product contains benzene and 1,3-butadiene in C <0.1%, therefore it is not classified as mutagen under hazardous substances regulation.

Below is a summary of the most representative studies of the Registration dossier.

Method	Result	Comments	Source
Test in Vitro Ames test in Salmonella strains OECD TG 471	Negative	Key study Methane	National Toxicology Program (1993)

Test in Vitro Ames test in Salmonella typhimurium OECD TG 471	Negative	Key study Propane	Kirwin CJ and Thomas WC (1980)
Test in Vivo Micronucleus test RAT Inhalation OECD Guideline 474	Negative	Key study LPG	Huntingdon Life Sciences (HLS) (2009b)

f) Carcinogenicity:

No evidence of carcinogenicity for the major components of LPG. In addition, the product contains benzene and 1,3-butadiene in C <0.1%, therefore it is not classified as mutagen under hazardous substances regulation.

g) Toxicity for reproduction:

Below is a summary of the most representative studies. Most studies have not shown consistent evidence of fertility toxicity; therefore, the product is not classified as toxic for reproduction under hazardous substances legislation.

Method	Result	Comments	Source
Study in vivo RAT Inhalation exposure 13 weeks, 6 h/d, 5 d/week) OECD Guideline 413 EPA OPPTS 870.3465 (90-	NOAEC: 10000 ppm (M/F) No effect on menstrual cycle, on spermatogenesis, mobility and sperm count.	Key study LPG	Huntingdon Life Sciences (HLS) (2009b)

Developmental/teratogenicity toxicity:

Below is a summary of the most representative studies. Most studies have not shown consistent evidence of developmental/teratogenicity toxicity for the major components of LPG. In addition, the product does not contain carbon monoxide in a concentration higher than 0.2%; therefore, it is not classified as toxic for reproduction under hazardous substances regulation.

Method	Result	Comments	Source
Study in vivo RAT Inhalation exposure M: 2 weeks before mating and 28 d. (minimum) after mating F: 2 weeks before mating 0-19 d. gestation 6 h/d., 5 d. a week Concentrations: 0, 1600, 5000 and 16000 ppm OECD Guideline 422 EPA OPPTS 870.3650	NOAEC (maternal toxicity): 16000 ppm (no effect of systemic toxicity at the highest concentration tested) NOAEC (maternal toxicity): 19678 mg/m ³ air NOAEC (toxicity on development): 16000 ppm (no effect on development) NOAEC (toxicity on development): 19678 mg/m ³ air	Key study Ethane (read- across)	Huntingdon Life Sciences (HLS) (2010a)

h) Specific target organ toxicity (STOT) — single exposure: based on available data, the classification criteria are not met

i) Specific target organ toxicity (STOT) — repeated exposure:

Oral:

In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations.

Skin:

In accordance with point 2 of Annex XI of REACH, this study should not be conducted because petroleum gas is flammable at ambient temperature and can form explosive mixtures with air. A high risk of fire and explosion would be associated with any test at significant concentrations.

Inhalation:

Propane: No neurological, haematological, or clinical effects were observed in a 6-week study of male and female rats. At 12,000 ppm, male animals showed a 25% decrease in weight during the first week of exposure.

The lowest concentration at which adverse effects were observed (LOAEC) in this study is 12,000 ppm (equivalent to 21,641 mg / m³).

j) Aspiration hazard: not applicable to gases and gas compounds.

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation

SECTION 12: Ecological information

No measured data are available for aquatic toxicity endpoints and PNEC(S) for fresh waters, marine waters, sediments and soil have not been derived. In accordance with column 2 of REACH, Annex VII and VIII, acute toxicity tests shall not be carried out where there are mitigating factors indicating that aquatic toxicity is unlikely. This product consists of gaseous substances at standard temperature and pressure, which are mainly broken down into air rather than sediment and soil water.

12.1 Toxicity

Below is a summary of the most representative studies.

Endpoint	Result	Comments
Aquatic toxicity		
Invertebrates Daphnia Short term	LC50 48/h: 14.22 mg/l	Key study CAS 106-97-8 (Butane) USEPA OPP (2008)
Fish Short term	LSO 96/h: 24.11 mg/l	Key study CAS 106-97-8 (Butane) QSAR EPA 2008

12.2 Persistence and degradability*Abiotic degradability:*

This product can contribute to the formation of ozone in the atmosphere near the surface. However, photochemical ozone formation depends on a complex interaction of other atmospheric pollutants and environmental conditions.

Biotic degradability:

Studies of QSAR have been conducted with ethane which has a 100% biodegradability in 16 days. The ethane is not a component of petroleum gases, but its structure is representative of the stream, and a read-across is possible; therefore, the product is biodegradable on the basis of what has been stated above.

12.3 Bioaccumulation potential

The log Pow for LPG is estimated in the range 1.09-2.8; therefore, the product is not bio accumulable.

12.4 Mobility in the soil

Koc absorption: the standard tests for this endpoint are not applicable to UVCB substances.

12.5 Results of PBT and vPvB assessment

Information not available.

The data show that the product properties do not meet the specific criteria detailed in Annex XIII or do not allow a direct comparison with all the criteria set out in Annex XIII, but nevertheless indicate that the product would not have such properties, so itself is not considered a PBT/vPvB.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Liquefied petroleum gas can contribute to the formation of ozone in the atmosphere.

SECTION 13: considerations for disposal**13.1 Waste treatment method**

The product conveys a character of danger to the waste which contain residues of it due to the flammability and the possibility of the formation of explosive atmospheres.

Avoid compacting or in any case damaging the containers. Apply the same safety standards to the waste that is foreseen for the entire product and in particular, the standard of not perforating the container or subjecting it to combustion.

Collect and deliver the waste (product and contaminated packaging) to specifically qualified disposers who are authorised to dispose of hazardous flammable waste.

Refer the prevailing regulation on hazardous waste disposal (Legislative Decree 152/2006 as updated and amended).

Potentially applicable EWC code: 16 05 04 "gases in pressure containers (including halons), containing dangerous substances".

SECTION 14: information for transport

14.1 UN number or ID number: 2037

14.2 UN proper shipping name: GAS CARTRIDGES

14.3 Transport hazard class(es): 2.1

14.4 Packaging group: not applicable

14.5 Environmental hazards: non-hazardous for the environment

14.6 Special precautions for the users:

- avoid transport on vehicles where the loading area is not separate from the driver and passenger compartment.
- Ensure that the driver is informed of the potential risk of the load and that he or she knows what to do in the event of an accident or emergency.
- Exemption for limited quantities (Section 3.4) = 1 litre / 30 kg.
- Tunnel restriction code: D
- Maritime transport: EmS: F-D, S-U
- Air transport: Packing instruction Y203

14.7 Maritime transport in bulk according to IMO instruments: not applicable

SECTION 15: information on regulation**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Risk of significant accident: product included for its flammable properties in annex 1, part 2 of DIRECTIVE 2012/18/EU. With the exception of what is indicated in the field of application and in the exclusions in the indicated regulation, for storage greater than the quantities indicated in said annex, refer to Art. 6, 7 or 8 of the above mentioned regulation.

Sale and use restrictions: no restriction in accordance with annex XVII of EC Regulation 1907/2006 (REACH) as amended and updated.

Substances on Candidate List (Art. 59 REACH): none.

Substances subject to authorisation (Annex XIV REACH): none.

15.2 Chemical safety assessment

A chemical safety assessment was not drafted for the substance.

SECTION 16: other information

The text of the hazard indications (H) mentioned in sections 2-3 of the safety data sheet

Flam. Gas 1 Flammable gas, category 1

Press. Gas Gas under pressure

H220 Highly flammable gas

H280 Contains gas under pressure: can explode if heated

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)



SAFETY DATA SHEET

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

Sheet no. 4831 – Rev. 7 of 02/2023
Replace revision: 6 (of: 05/2019)

PROPANE-BUTANE

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Information on this revision

Changes from the previous revision are indicated with a black border on the left-hand side of the page.

Main sources of the data used to draft the sheet

- Safety data sheets of the raw materials.
- National Institute for Occupational Safety and Health (NIOSH, USA): Registry of Toxic Effects of Chemical Substances, 2010.
- American Conference of Governmental Industrial Hygienists (ACGIH), 2010.
- ECHA Website (European Chemicals Agency)

Indications on training

Personnel in charge of handling and using the product must be instructed on the specific risks and the safety measures.

Written references: see specific technical instruction indicated on the product.

Technical contact centre: telephone +39.030.9911855

Notes for the user

The information contained on this safety data sheet is based on our current knowledge of health, safety and the environment. The purpose of it is to allow the professional user of the product to identify preventive and protective behaviour useful for the purposes of safe operation.

The product user, prior to any use other than the foreseen use, must verify whether other information is required, in any case presuming observance of the pertinent laws and good operating practice.

We will not be liable for any improper use of the product.

The characteristics mentioned should not be considered as a guarantee of specific properties of the product.

The product label or safety data sheet should be presented in the event of any necessary medical treatment.