Technical Publication

Bullfinch (Gas Equipment) Ltd Data Sheet – **Liquefied Propylene Gas**

Safety Data Sheet N0.1 REV. 04 (03/10/2019)
Replaces all other revisions.

This safety data sheet (SDS) has been prepared in accordance with the requirements of EU Regulations 1907/2006 Annex 11, Amended by Commission Regulation (EU) 2015/830 According to Regulation (EC) No. 1272/2008.

1. Identification of the substance / Mixture and of the Company/Undertaking

1.1 Product Identifier	
Substance Name	Liquefied Propylene Gas (odorized)
Product Description	Liquefied Propylene, Propene Gas Consisting predominantly C_3 Hydrocarbons supplied as a fuel in a closed system meeting the requirements of BS4250 with <0.1% 1,3 Butadiene.
Trade Name(s)	Bullfinch 1694 Hi-Pro 400g
CAS Number	115-07-1
EC Number	204-062-1
Reach Registration Number	01-2119447103-50-xxxx
1.2 Relevant identified uses of the substance or mixture and uses advised against: None	
Identified Uses(s)	Welding, PC 0. Other: Industrial Uses. PC 1: Adhesives, Sealants. PC 3: Air care Products. PC 4: Anti-Freeze and De-icing Products. PC 8: Biocidal Products. PC 9a: Coatings and Paints, Thinners, Paint removers. PC 13: Fuels. PC 16: Heat Transfer Fluids. PC 19: Intermediate. PC 21: Laboratory Chemicals. PC 24: Lubricants, Greases, Release Products. PC 27: Plant Protection Products. PC 28: Perfumes, Fragrances. PC 31: Polishes and Wax blends. PC 32: Polymer Preparations and Compounds. PC 33: Semiconductors. PC 35: Washing and Cleaning Products. PC 37: Water Treatment Chemicals. PC 39: Cosmetics, Personal care products. PC 41: Oil and Gas exploration or production products. SU 0: Other 3: Industrial Uses: Uses of substances as such or in preparations at industrial sites. SU0: Other 22: Professional uses: Public domain (administration, education, entertainment) SU 2a: Mining (without off shore industries) SU 2b: Offshore Industries. SU 8: Manufacture of bulk, large scale chemicals (including petroleum) SU 9: Manufacture of fine chemicals. SU 10: formulation[mixing] of preparations and /or re-packaging (excluding alloys) SU 12: Manufacture of Plastic products, including compounding and conversion. SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cements. SU 16: Manufacture of computer, electronic and optical products, electrical equipment. SU 17: General Manufacturing. SU 19: Building and construction Work.
Uses Advised Against	PC 0: Other: Substance is contained within lubricant and grease products.
1.3 Details of the Supplier of the Safety Data Sheet	
Company	Bullfinch (Gas Equipment) Ltd
Address	Diadem Works, Kings Road, Tyseley, Birmingham B11 2AJ
Telephone	01217652000
Website	www.bullfinch-gas.co.uk
Email	sales@bullfinch-gas.co.uk
1.4Emergency Telephone Number	
Emergency Number	01217652000 (Mon-Fri 9:00 – 5:30)
Language Spoken	English

2. Hazards Identification

2.1 Classification of substance or mixture:

2.1.1 Classification:

The substance is classified as the following according to REGULATION (EC) No 1272/2008:

REGULATION (EU) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Press. Gas	H280
Flam. Gas 1	H220

2.2 Label elements:

Hazard Pictograms:

Signal Word(s): Danger

Hazard Statement: H220: Extremely flammable gas
H280: Contains gas under pressure; may explode if heated

Precautionary Statement: P210: Keep away from heat, Hot surfaces, sparks, open flames and other ignition sources. No Smoking.
P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381: Eliminate all ignition sources if safe to do so.
P403: Store in well ventilated place.
P410 + P403: Protect from sunlight. Store in well ventilated place

2.3 Other Hazards:
The other substance is not PBT / vPvB.

3. Composition/information on ingredients

Substance/Mixture: Substance

Ingredients:

Chemical Name	**Registration No.**	**CAS No.**	**EC No.**	**Concentration**
Propylene	01-2119447103-50-xxxx	115-07-1	204-062-1	100%

4. First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist seek medical attention.

4.1.1 In case of inhalation:

Move person to fresh air. Do not leave the victim unattended. Keep patient warm and at rest. If unconscious place into the recovery position. Seek medical attention. If breathing is difficult give oxygen if possible or assisted ventilation. In the event of cardiac arrest, (no pulse) apply cardiac pulmonary resuscitation.

4.1.2 In case of skin contact:

Do not remove clothing that adheres due to freezing. Immediately flush affected area with plenty of water – continue for at 15 minutes. If there are signs of frostbite (blanching or redness of the skin or burning or tingling sensations) do not rub, massage or compress the affected area, send casualty immediately to hospital.

4.1.3 In case of eye contact:

Remove any contact lenses, flush eyes with water thoroughly and continuously for 10 minutes. Keep eye wide open during rinsing. If there are signs of frostbite, pain, swelling, lachrymation or photophobia persists the patient should be seen in a specialist at hospital.

4.1.4 In case of ingestion:

Is not considered a likely route of exposure – frostbite to the lips and mouth may occur if in contact with the liquid. As material is a Gas refer to inhalation.

4.2 **Most important symptoms and effects, both acute and delayed:**

This product is not classified as harmful to human health effect.

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

If skin irritation or rash occurs, get medical advice / attention.

5. Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:	use an extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media:	NOT available
5.2 Special hazards arising from the substance or mixture:	contains gas under pressure. Extremely flammable gas. In fire or if heated, a pressure increase will occur and the container my burst, with risk of a subsequent explosion. Materials: Carbon dioxide and Carbon monoxide.
5.3 Advice for firefighters:	Self-contained breathing apparatus with full face mask and full protective clothing (standard wear)

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:	Accidental release pose a serious fire or explosion hazard. Immediately contact emergency services. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding area. Keep unnecessary and unprotected personal from entering. Shut off ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Use appropriate PPE (Personal protective equipment)
6.1.2 For emergency responders:	wear an appropriate NIOSH/MSHA approved respirator if gas is generated.
6.2 Environmental Precautions:	Prevent further leak or spillage if safe to do so. Prevent spillage from entering drains or any place accumulation be able to occur. Ensure adequate ventilation, especially in confined areas. If the spillage has or is going to contaminate rivers, lakes or drains inform relative authorities immediately.
6.3 Methods and material for containment and clean up:	**Small spill**: Immediately contact emergency personnel. Stop leak if it is safe to do so. Use spark-proof tools and explosion proof equipment. **Large spill:** Immediately contact emergency personnel. Stop leak if it is safe to do so. Use spark-proof tools and explosion proof equipment.
6.4 Reference to other sections:	See section 7 for information on safe handling. See section 8 for information on personal protection equipment. See section 13 for information on disposal.

7. Handling and Storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:	Consider technical advances and process upgrades (including automation) for elimination of release. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/ local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible prior to maintenance. Consider the need for risk-based health surveillance. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regular inspection, test and maintain control measures. Smoking, eating and drinking should be prohibited. Use only in well ventilated areas. Avoid all sources of ignition, oxidising agents, chlorine and hydrogen fluoride. Take precautionary measures against discharge, use proper bonding and/or grounding procedures. Use piping and equipment designed to withstand the pressures to be encountered. Use a check valve or other protective device to prevent reverse flow. Cleaning, inspection and maintenance of the internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Handle empty containers with care; vapour residue maybe flammable. Do not pressurise, cut, weld, braze, solder, drill or grind on containers. Dispose of rinse water in accordance with local and national regulations. The vapour is heavier than air, beware of accumulations in pits and confined

spaces. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products are followed.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas.

7.2 Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Packaging materials: Recommended: steel, stainless steel. Aluminium.

7.3 Specific end use(s): Not applicable.

8. Exposure Controls/Personal Protection

8.1 Control parameters

8.1.1 Occupational exposure limits:

				Occupational Exposure Limits value (8hours ref: period)		Occupational Exposure Limits Value (15 minutes Ref: Period)		
Country	Substance	EINECS No.	CAS No.	Ppm	Mg/m^3	Ppm	Mg/m^3	Note
Ireland	Propylene	204-062-1	115-07-1	-	-	-	-	Asphx.

8.1.2 Additional exposure limits under The conditions of use: Not available

8.1.3 DNEL/DMEL and PNEC-Values: Not available

8.2 Exposure Controls:

8.2.1 Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Close fitting protective goggles or face protection

Hand protection: Glove material suitable protective gloves, e.g. nitrile- butadiene rubber (NBR) gloves, leather gloves, heat insulating. Insulated gloves with 4-8 hours breakthrough time.

Body protection: select materials and equipment for physical protection depending on the concentration and volume of hazardous substances and the workplace involved.

Respiratory protection: use a properly fitted, air purifying or air fed respirator complying with an approved standard. If risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, hazard of the product and safe working limits of the selected respirator. Recommended self-contained breathing apparatus (SCBA)

Thermal hazards: wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment. According to local regulations, federal and official regulations.

9. Identification of the substance / Mixture and of the Company/Undertaking

9.1 Information on basic physical and chemical properties:

Appearance:	Gas
Colour:	Colourless
Odour:	Odorant added to provide a distinctive smell.
Odour Threshold:	<20% of lower Flammable limit.
pH:	Not available
Melting point / range (°C):	-185 °C
Boiling point/range (°C):	-48 °C
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit – lower (%):	Not available
Flammability (Solid, Gas):	Extremely flammable
Ignition temperature (°C):	Not available
Upper/lower exposure limits:	11% / 2%
Vapour pressure (20 °C):	Not available
Vapour Density:	Not available
Relative Density:	Not available
Bulk Density (Kg/m³):	Not available
Water solubility (g/l):	200 mg/L (25 °C)
n-Octanol/Water (log Po/W):	1.77 (20 °C)
Auto-ignition temperature:	455 °C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not available
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	C_3H_6
Molecular weight:	42.08

9.2 Other information:

Fat solubility (solvent-oil to be specified)	Not available
Surface tension:	Not available
Dissociation constant in water (pKa)	Not available
Oxidation reduction Potential:	Not available

10. Stability and reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical Stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Keep away from heat and sources of ignition.
10.5 Incompatible materials:	Oxidising agents, Water, nitrogen oxides (NO, NO2, etc).
10.6 hazardous decomposition products:	Oxides of carbon.

11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:	
LD50(oral, rat):	Not available
LD50(Dermal, Rabbit):	Not available
LD50(Inhalation, Rat):	Not available
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or Skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT – single exposure:	Not classified
STOT – repeated exposure:	Not classified
Aspiration hazard:	Not classified

12. Ecological information

12.1 Toxicity:

Acute (short-term) toxicity:	
LC50(96h, Fish):	51.7 mg/L
LC50(48h, Crustacea):	28.2 mg/L
EC50(96h, Algae/aquatic plants):	12.1 mg/L
Chronic (Long-term) toxicity:	
NOEC(Fish):	Not available
NOEC(Crustacea):	Not available
EC50(Algae/aquatic plants):	not available
12.2 Persistence and degradability:	Readily biodegradable.
12.3 Bio accumulative potential:	Not available
12.4 Mobility in Soil:	Not available
12.5 Results of PBT and vPvB assessment:	The substance is not PBT / vPvB.
12.6 Other adverse effects:	Not available

13. Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible. Otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers unit they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

14. Transport Information

	Land Transport (ADR/RID)	Inland Waterways (ADN)	Sea Transport (IMDG)	Air Transport (ICAO/IATA)
UN number	1077	1077	1077	1077
UN Proper shipping name	Propylene	Propylene	Propylene	Propylene
Transport hazard class(s)	2.1	2.1	2.1	2.1
Packing Group	-	-	-	-
Environmental hazard	No	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
Transport in bilk according to	-	-	-	-

15. Regulatory Information

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

Relevant information regarding authorization: Not applicable
Relevant information regarding restriction: Not applicable
Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.
Other National regulations: Not applicable

15.2 Chemical safety assessment: **Yes** [X] **No** [ ]

16. Other Information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2015/830

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International carriage of Dangerous Goods by Road
RID: Regulation for rail International Transport of Dangerous Goods
AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: Code international maritime dangerous goods code
ICAO: International Civil Air Transport Association
LC50: Median lethal concentration
EC50: The effective concentration of substance that causes 50% of the maximum response.
NOEC: No Observed Effect Concentration
DNEL: Derived n-effect level
PNEC: Predicted no-effect concentration

16.3 Key literature reference and source data:

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC):

1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Press. Gas	**H280**	**On basis of test data**
Flam. Gas 1	**H220**	**On basis of test data**

16.5 Relevant H-statements (number and full text):

H220: Extremely flammable gas
H280: Contains gas under pressure; may explode if heated

16.6 Training instructions:
Not applicable

16.7 Further information:
This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employer should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and use of the product not in conformance with Safety Data Sheet, or in combination with any other product or process, is responsibility of the user.