Safety Data Sheet

According to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2024/2865

According to GB CLP classification

FLAMMABLE GAS; PROPYLENE, PROPANE MIXTURES, STABILIZED

Version 1.0

Issue date: 14-05-2025

Revision date: 14-05-2025 **CIRS SDS Record Number: CSSS-TCO-010-166458**

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name:	FLAMMABLE GAS; PROPYLENE, PROPANE MIXTURES, STABILIZED
Additional identification:	Nano form is NOT covered by this SDS.
UFI:	N/A
Identification of the product:	See section 3
Index Number:	See section 3
UK REACH registration No.:	See section 3

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

1.2.1 Identified uses:

CHEMICAL REAGENT • FUEL.

1.2.2 Uses advised against:

No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative):

Supplier(Manufacturer):	Arctic Hayes Ltd
Address:	Unit 9 Millshaw Park Ave | Leeds | LS11 0LR
Contact person(E-mail):	
Telephone:	+44(0)113 271 5245

1.4 Emergency telephone Number:

+44(0)113 271 5245 - (Mon-Thur: 08:30-17:00 | Fri: 08:30-16:00)

Section 2 Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification of the mixture:

The mixture is classified as following according to according to GB CLP:

Retained CLP Regulation (EU) No. 1272/2008 as amended for Great Britain (GB CLP)	
Hazard classes/Hazard categories	Hazard statement
Flam. Gas 1	H220
Press. Gas (Liq.)	H280

For full text of H- phrases: see section 2.2.

2.2 Label elements:

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s): H220: Extremely flammable gas.

Precautionary statement(s):	H280: Contains gas under pressure; may explode if heated. 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: In case of leakage, eliminate all ignition sources. P403: Store in a well-ventilated place. P410 + P403: Protect from sunlight. Store in a well-ventilated place.
Supplemental Hazard information (EU)	Not applicable.

2.3 Other hazards:

The mixture does not contain PBT/vPvB substance.

The mixture does not contain endocrine disruptor.

Section 3 Composition/information on ingredients

Substance/Mixture: Mixture

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration	Classification	Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)
Propylene	UK-01-3689956022-5-0051	115-07-1	204-062-1	85-90%	H220 H280	N/A
Propane	UK-01-1712850478-8-0007	74-98-6	200-827-9	10-15%	H220 H280	N/A

Section 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:

If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.

4.1.2 In case of skin contact:

Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. Do not apply any form of direct heat. Seek immediate medical attention.

4.1.3 In case of eyes contact:

Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.

4.1.4 In case of ingestion:

Due to product form and application, ingestion is considered unlikely.

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

In high concentrations may cause asphyxiation. Direct contact with the liquefied material or escaping compressed gas may cause frostbite injury.

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

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

Section 5 Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture: Extremely flammable. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling.

5.3 Advice for firefighters: Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Cool cylinders or containers exposed to fire by applying water from a protected location. Do not approach cylinders or containers suspected of being hot. This material is capable of forming explosive mixtures in air.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel: If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS. Ventilate area where possible and eliminate ignition sources.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if vapour is generated.

6.2 Environmental precautions: Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3 Methods and material for containment and cleaning up: Stop the flow of material, if this is without risk. If the leak is irreparable, move the cylinder to a safe and well ventilated area, and allow to discharge. Keep area evacuated and free from ignition sources until any leaked or spilled liquid has evaporated.

6.4 Reference to other sections: See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation.
Observe good personal hygiene, including washing hands before eating.
Prohibit eating, drinking and smoking in contaminated areas.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities: Do not store near incompatible substances and sources of ignition. Cylinders should be stored: upright, prevented from falling, in a secure area; below 45°C, in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.

7.3 Specific end use(s): Not applicable.

Section 8 Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

				Occupational Exposure	Occupational Exposure Limit Value (15-minute

				Limit Value (8-hour reference period)		reference period)		
Country	Substance	EINECS No.	CAS No.	ppm	mg/m^3	ppm	mg/m^3	Note
Ireland	Propene	204-062-1	115-07-1	500	-	-	-	-
Finland	Propane	200-827-9	74-98-6	800	1500	1100	2000	-

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 workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety glasses.

Skin protection

Hand protection: Wear leather or insulated gloves.

Body protection: Wear coveralls.

Respiratory protection: Where an inhalation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.

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.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state: Colourless gas (liquefied under pressure)

Colour: Colourless

Odour: Faint disagreeable odour

Odour threshold: Not available

pH: Not available

Melting point/freezing point (°C): Not available

Boiling point or initial boiling point and boiling range (°C): -47.4°C

Flash point (°C): -108°C(closed cup)

Evaporation rate: Not available

Flammability limit - lower (%): Not available

Flammability (gas, liquid, solid): Extremely flammable gas

Ignition temperature (°C): Not available

Lower and upper explosion limit: LEL: 1.9 %;UEL: 11 %

Vapour pressure (20°C): 778 kPa @ 25°C

Relative vapour density: Not available

Relative Density (g/cm^3): 1.65 (Air = 1)

Bulk density (kg/m^3): Not available

Solubility in water (g/l, 25°C): Not available

Solubility in other polar and non-polar solvents (g/l, 20°C): Not available

Partition coefficient n-octanol/water Not available

(log Po/w, 20°C):	
Auto-ignition temperature:	455 °C
Decomposition temperature:	Not available
Kinematic viscosity (mm²/s):	Not available
Particle characteristics:	Not applicable
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available

9.2. Other information:

Fat solubility(solvent-oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Critical temperature	96°C
Critical pressure	4175 kPa

Section 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:	Incompatible materials. Avoid heat, sparks, open flames and other ignition sources.
10.5 Incompatible materials:	Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), heat and ignition sources. Do not use natural rubber flexible hoses. Also incompatible (potentially violently) with oxygen, halogens and metal halides.
10.6 Hazardous decomposition products:	Carbon dioxide and carbon monoxide.

Section 11 Toxicological information

11.1 Information on hazard classes as defined in GB CLP:

Acute toxicity:	
LD50(Oral, Rat):	Not available
LD50(Dermal, Rabbit):	Not available
LC50(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

11.2 Information on other hazards

Endocrine disrupting properties	The mixture does not contain endocrine disruptor.
Other information	Not applicable

Section 12 Ecological information

12.1 Toxicity:

Propylene(CAS#115-07-1)

Acute (short-term) toxicity:	
LC50(96h, Fish):	51.7 mg/L
LC50(48h, Crustacea):	28.2 mg/L
EC50(72h, Algae/aquatic plants):	Not available
Chronic (long-term) toxicity:	
NOEC(Fish):	Not available
NOEC(Crustacea):	Not available
EC50(Algae/aquatic plants):	Not available
12.2 Persistence and degradability:	Not available
12.3 Bioaccumulative potential:	Not available
12.4 Mobility in soil:	Not available
12.5 Results of PBT and vPvB assessment:	The mixture does not contain PBT / vPvB substance.
12.6 Endocrine disrupting properties:	The mixture does not contain endocrine disruptor.
12.7 Other adverse effects:	Not available.
12.8 Additional information	Not available.

Section 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 until 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.

Section 14 Transport Information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
14. 1 UN number or ID number	UN2037	UN2037	UN2037	UN2037
14.2 UN proper shipping name	GAS CARTRIDGES	GAS CARTRIDGES	GAS CARTRIDGES	GAS CARTRIDGES
14.3 Transport hazard class(es)	2.1	2.1	2.1	2.1
14.4 Packing group	-	-	-	-

14.5 Environmental hazards	No	No	No	No
14.6 Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
14.7 Maritime transport in bulk according to IMO instruments	-	-	-	-

Section 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 GB 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 [ ] NO [X]

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by GB CLP

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International 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 no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to GB CLP

Classification according to GB CLP		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:

Employers 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 any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.