

# MATERIAL SAFETY DATA SHEET

## VORTEX PROPANE 400g



### 1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

**Product Name** Vortex Propane

**Product No** VG2

**Supplier** Arctic Products Limited  
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Leeds  
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### 2) HAZARDS IDENTIFICATION

**Classification (1999/45)** F+,R12.

**Classification (EC 1272/2008)** Flam. Gas1-H220 Not classified. Not classified.

**Label in accordance with (EC) No. 1272/2008**



**Signal Word** Danger

**Hazard Statements** H220 Extremely flammable gas.

**Precautionary Statements** P210 Keep away from heat/sparks/open flames/hot surfaces - No Smoking.  
P403 Store in a well ventilated place.

**Supplementary Precautionary Statements** P377 Leaking gas fire: Do not extinguish unless leak can be stopped safely.  
P381 Eliminate all ignition sources if safe to do so.

### 3) COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterisation

Description: The component of this product is in the form of elements listed below with additions.

Components Number	CAS Number	Approx (%) by Wt. or Vol.	GHS Classification
Butane	106-97-8	30-40%	Flam. Gas 1 Press. Gas; H220
Propane	74-98-6	60-70%	Flam. Gas 1 Press. Gas; H220

## 4) FIRST AID MEASURES

Persons using these products should consult a physician or other medical professional if an accident involving these products occurs. Specific first-aid measures are as follows:

- Eye contact:** Immediately drench eyes with cold water, irrigating the affected area for 10 minutes. As soon as possible get medical aid and/or remove subject to hospital for specialised treatment.
- Skin contact:** Immediately drench skin with cold water, irrigating the affected area for 10 minutes. As soon as possible get medical aid and/or remove subject to hospital for specialised treatment.
- Inhalation:** Remove subject to fresh air as soon as possible using self contained breathing apparatus if appropriate to protect rescuer. If subject is breathing, keep warm and at rest, preferably laying down. Do not leave the subject. Remove contaminated clothing if possible. If subject has stopped breathing, give appropriate artificial respiration (preferably with a brook airway). When breathing starts, place subject in recovery position. Do not leave the victim. Get medical assistance as soon as possible, remove to hospital for further treatment. Give oxygen if available (short applications, not continuous therapy).
- Ingestion:** Remove subject to fresh air as soon as possible and follow the guidelines for **Inhalation** above.

## 5) FIRE-FIGHTING MEASURES

<b>Extinguishing Media</b>	Dry powder, water fog/spray.
<b>Unsuitable Extinguishing Media</b>	Standard water jet fire hoses can spread fire and may cause dangerous explosions.
<b>Special Fire Fighting Procedures</b>	Fires involving gases usually give off TOXIC FUMES and VAPOURS. Approach fire or gas leaks with caution from upwind and with respiratory protection if available.
<b>Unusual Fire and Explosion Hazards</b>	Danger of explosion in enclosed space - keep nearby gas containers cool with water spray.
<b>Explosion Sensitivity to Mechanical Impact</b>	Not available.
<b>Explosion Sensitivity to Static Discharge</b>	Not available.

## 6) ACCIDENTAL RELEASE MEASURES

<b>Release Response</b>	If there is a leakage from a small amount of gas, evacuate people from the immediate danger area and the area in the path of the gas cloud, if possible. Switch off all sources of ignition. No smoking, Isolate leaking container(s), if possible. Stop leak at source. If leakage cannot be stopped, remove container(s) to an isolated area, clear of buildings, people and sources of ignition. Attempts should be made to prevent gas vapours entering drains or gullies. Vapours will disperse to atmosphere if sufficient air flow is available.
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## 7) HANDLING AND STORAGE

<b>Usage Precautions</b>	Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire, minimize ignition sources. Use explosion-proof electrical (ventilation, lighting and material handling) equipment. Do not puncture or incinerate container. High pressure gas. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical
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damage; do not drag, roll, slide or drop. Use a suitable hand truck for cylinder movement.

<b>Fire and Explosion Protection</b>	Do not handle, store or open near an open flame, sources of heat or ignition.
<b>Storage Precautions</b>	Keep container in a cool, well ventilated area.
<b>Storage in One Common Storage Facility</b>	Keep container tightly sealed.
<b>Storage Condition</b>	Cylinders should be stored upright, with valve protection cap in place and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52°C (125°F).

## 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Relevant only to unburned gases. The following exposure limits are taken from the Health & Safety Executive Guidance Note EH40/2005 Workplace exposure limits.
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### Workplace Exposure Limits

<b>Butane-Propane Gas Mixture (A.O.)</b>	1450mg/cubic metre (600ppm) 8-hour TWA value. 1810mg/cubic metre (700ppm) 15-min TWA value.
<b>Liquefied Petroleum Gas</b>	1750mg/cubic metre (1000ppm) 8-hour TWA value. 2180mg/cubic metre (1200ppm) 15-min TWA value.

### Personal Protective Equipment

<b>Protection of Hands</b>	Use rubber gloves if in contact with liquid.
<b>Protection of Eyes</b>	Use goggles or face shield when handling in liquid form. When used as a fuel source, the above controls will not be necessary. However, products fuelled by LPG should always be used in well ventilated areas, preferably outdoors.
<b>Protection of Respiratory Tract</b>	Should be used if there is a risk of high vapour concentration.
<b>Protection of Body</b>	Wear protective overalls with long sleeves to protect exposed skin.
<b>General Protective/Hygienic Measures</b>	Not available.
<b>Material of Gloves</b>	Cloth or leather gloves recommended.

## 9) PHYSICAL AND CHEMICAL PROPERTIES

### General Information

<b>Form</b>	Gas
<b>Colour</b>	Colourless
<b>Odour</b>	Distinctive and unpleasant (stenched)

### Change in Condition

<b>Melting Point/Range</b>	Not available
<b>Boiling Point/Range</b>	-42°C
<b>Flash Point</b>	Less than -40°C
<b>Self Igniting</b>	410/550°C
<b>Danger of Explosion</b>	Not available
<b>Vapour Pressure</b>	4.1 bar @ 20°C
<b>Partition Co-Efficient</b>	Not available

<b>Density</b>	Not available
<b>Relative Density</b>	@ 20 °C: 0,55 to 0,56
<b>Vapour Density</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Solubility in/Miscibility With Water</b>	Immiscible
<b>PH Value</b>	Neutral
<b>Viscosity</b>	Not available
<b>Dynamic</b>	Not available

## 10) STABILITY AND REACTIVITY

<b>Chemical Stability</b>	In contact with water releases flammable gases which may ignite spontaneously.
<b>Dangerous Decomposition Products</b>	The substances arising from the thermal decomposition of these products will largely depend on the conditions bringing about decomposition. The following substances may be expected from normal combustion: Carbon Dioxide (Polycyclic Aromatic Hydrocarbons), Carbon Monoxide (Unburned Hydrocarbons), water (Unidentified Organic and Inorganic Compounds), particulate matter (Nitrogen Oxides).
<b>Hazardous Polymerizations</b>	Will not occur.
<b>Conditions to Avoid</b>	Sources of ignition (store below 50 °C
<b>Materials to Avoid</b>	Strong oxidising agents, e.g. chlorates which may be used in agriculture.

## 11) TOXICOLOGICAL INFORMATION

### Potential Health Effects

#### Acute Effect

<b>Inhalation</b>	Exposure to higher concentrations of Liquefied Butane Gases can lead to drowsiness, unconsciousness and subsequent asphyxiation. Very high concentrations can lead to abnormal heart rhythms and possibly death.
<b>Skin</b>	Skin contact with Liquefied Butane Gases, occurring as a result of the rapid evaporation of the liquid gas, may result in cold burns.
<b>Eye</b>	Eye contact with rapidly evaporating Liquefied Butane Gases may cause cold burns.
<b>Ingestion</b>	Whilst this is not a normal hazard associated with Liquefied Butane Gases, abuse by inverting gas containers can result in the liquid being ingested. In these circumstances, the hazards are the same as for inhalation.

<b>Chronic Effect</b>	Not available.
<b>LD50</b>	Not available.

## 12) ECOLOGICAL INFORMATION

### Ecotoxical Effects

**Effect of Material on Plants or Animals** Not available.

**Effect of Material on Plants or Aquatic Life** Not available.

**Ecological Data** No known ecological damage will be caused by this product.

## 13) DISPOSAL CONSIDERATIONS

**Water Disposal Methods** Any disposal route should comply with local by-laws and the requirements of the Environment Protection Act, 1990. Liquefied Butane Gases are subject to the Control of Pollution (Special Waste) Regulations 1980. For disposal of surplus quantities of gas containers, contact your local supplier or representative.

**Disposal must be made according to official regulations.**

## 14) TRANSPORT INFORMATION

### Conveyance by Road and Railways - ADR/RID

<b>Class ADR/RID</b>	2
<b>Classification Code</b>	5F
<b>UN Number</b>	2037
<b>Proper Shipping Name</b>	Gas cartridge (flammable) without release device, not refillable and not exceeding 1L capacity.
<b>Hazard Label</b>	2.1
<b>Packing</b>	Combination packages (Fibreboard) - Limited Quantities.
<b>Description of Goods</b>	Mixed gas for welding applications.

### Conveyance by Sea - IMDG

<b>Class IMDG</b>	2.1
<b>UN Number</b>	2037
<b>Proper Shipping Name</b>	Gas cartridge (flammable) without release device, not refillable and not exceeding 1L capacity.
<b>Label</b>	2.1
<b>Packing</b>	Combination packages (Fibreboard) - Limited Quantities.
<b>EMS Number</b>	Not regulated.
<b>Sea Pollutant</b>	No.
<b>Description of Goods</b>	Mixed gas for welding applications.

### Conveyance by Air - ICAO/IATA

<b>Class ICAO/IATA</b>	2.1
<b>UN Number</b>	2037
<b>Proper Shipping Name</b>	Gas cartridge (flammable) without release device, not refillable and not exceeding 1L capacity.
<b>Label</b>	2.1
<b>Packing</b>	Combination packages (Fibreboard) - Limited Quantities.
<b>Description of Goods</b>	Mixed gas for welding applications.

15) REGULATORY INFORMATION

Other National Regulations

SARA	Not available.
ICAO/IATA	Not available.
TSCA	Not available.
DOT	Not available.

16) OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.