

1. Identification of Substance & Company

Product

Product name	450g Odourised Propane/Butane Gas disposable threaded cartridge
Product code	CM450
HSNO approval	HSR002532
Approval description	Gases Under Pressure Mixtures (Flammable) Group Standard 2020
UN number	2037
Proper Shipping Name	RECEPTACLES, SMALL, CONTAINING GAS (gas cartridges) without a release device, non-refillable
DG class	2.1
Packaging group	NA
Hazchem code	NA
Uses	Combustible gas for use as a disposable cartridge for connection to appliances certified for use with propane/butane gas mixtures.

Company Details

Company	Amalgamated Hardware Merchants Ltd (AHM)	
Address	8 Hautu Drive, Wiri, Manukau, New Zealand	PO Box 97162 Manukau 2241 New Zealand
Telephone	+64 9 2511310	

National Poison Centre: 0800 764 766

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002532, Gases Under Pressure Mixtures (Flammable) Group Standard 2020). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2020.

GHS 7 Classes

Flammable Gas cat 1A

Hazard Statements

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

SYMBOLS

DANGER



Precautionary Statements

Prevention	P103 - Read label before use. P210 - Keep away from ignition sources. No smoking. P251 - Pressurized container: Do not pierce or burn, even after use.
Response	P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 - In case of leakage, eliminate all ignition sources.
Storage	P403 - Store in a well-ventilated place.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

Other Hazards

This substance acts as a simple asphyxiant at high concentrations. Ensure adequate ventilation is provided.
P261 Avoid breathing gas.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
n-Butane	106-97-8	7-15%
Isobutane	75-28-5	65-70%
Propane	74-98-6	18-28%
other ingredients (gaseous)	-	<2%

All constituents of this material are listed on the Australian Inventory of Chemical Substances.

May contain CP630 as an odourant at a dose rate of <25 ppm. CP630 is made up of dimethylsulfide, tertiary butyl mercaptan, ethyl methylsulphide, n-pentane & n-hexane.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call a doctor or National Poison Centre if you feel that you may have been harmed or irritated by this product.

National Poison Centre: 0800 764 766 (24 hr emergency service).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed	The product is not considered acutely toxic. Ingestion is unlikely due to product form (gaseous). In case of persistent symptoms, seek medical advice
Eye contact	If product gets in eyes, this may result in a cold burn. Immediately flush eyes with tepid water or sterile saline solution. Holding eyelids apart, continue to wash for 15 mins. Seek medical advice.
Skin contact	This product is non-irritating to skin. However, contact may result in a cold burn. Remove contaminated clothing and gently flush affected areas with tepid or cold water for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in cold water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.
Inhaled	The gas is considered to be an asphyxiant. Remove from area of exposure immediately. If assisting a victim avoid becoming a casualty. Be aware of possible explosive atmospheres. If victim is not breathing apply artificial respiration and seek urgent medical attention. Give oxygen if available. Keep warm and rested. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	Gas may form an explosive mixture in air which can be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam, fog sprays.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	NA

6. Accidental Release Measures

Containment	If greater than >200 kg is stored emergency plans to manage any potential gas leak must be in place. Emergency plans must be in place to manage any potential gas leak must be in place.
Emergency procedures	Pressurised liquid leaks will immediately vaporise at normal air pressures. Avoid breathing gas. Avoid contact of the liquid with skin and eyes. Clear area of all unprotected personnel. Extinguish or remove all sources of ignition. Switch off power supplies. Shut off leak if safe to do so. Contact emergency authorities and advise of nature of hazard.
Clean-up method	Increase ventilation.
Disposal	Dispose of empty fuel cells in accordance with local waste management regulations. (See

Precautions section 13).
Wear appropriate PPE (see section 8).

7. Storage & Handling

Storage Do not store near sources of ignition or incompatible materials. Store below 45°C in a secure area. Also store removed from oxidizers. Keep away from children.
This substance must be stored locked up if >100kg is stored.

Handling Before use carefully read the product label and instruction for use. Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

Workplace Exposure Stds	Ingredient	TWA	STEL
	Butane	800ppm 1900mg/m ³ *	NA
	Propane	Asphyxiant	NA

No Biological limits have been entered for this product or the ingredients.

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes To protect eyes, it is recommended that goggles, safety glasses or full face mask be worn. Avoid wearing contact lenses.

Skin Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves, e.g. PVA gloves.

Respiratory A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with an organic vapour cartridge. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance colourless gas in a canister

Odour Slight odour (odourant added)

Odour Threshold Must be readily detectable when the concentration in the atmosphere reaches 20% of the lower explosive limit.

pH no data

Freezing/melting point no data

Boiling Point <2°C

Flashpoint -60°C

Flammability Extremely flammable gas

Explosive limits Mixtures of flammable gas / air may explode if gas concentration lies between the lower range (LIE) and higher range (LSE) of explosion limits :
butane : LIE = 1.8% and LSE = 8.4%
isobutane : LIE = 1.8% and LSE = 9.8%
propane : LIE = 2.2% e LSE = 10%.

Vapour pressure Dependent on temperature, for example, the vapour pressure shall be 360kPa when the canister surface temperature (adjacent to the air space, on the opposing side to the liquid product) is 60°C

Vapour density >1 (heavier than air)

Specific gravity/density 0.584mg/m³ for the liquid product

Solubility insoluble in water

Partition coefficient Log Kow in the range from 2.36 to 3.0

Auto-ignition temperature	405°C
Decomposition temperature	no data
Viscosity	not applicable
Particle Characteristics	not applicable
Gas density	higher than air. Gas has a tendency to deposit at ground level.

10. Stability & Reactivity

Stability	This product is unlikely to react or decompose under normal storage conditions. This product will not undergo polymerisation reactions.
Conditions to be avoided	Flammable substance. Keep away from heat and sources of ignition at all times.
Incompatible groups	Oxidizing agents, halogens and acids.
Substance Specific Incompatibility	Thermal decomposition products include carbon oxides, water and carbon.
Hazardous decomposition products	No specific hazards.
Hazardous reactions	This product is unlikely to react or decompose under normal storage conditions. This product will not undergo polymerisation reactions.

11. Toxicological Information

Summary

IF INHALED: Butane gas is a simple asphyxiant. It may cause difficulty breathing. It may cause coughing (respiratory irritation). Breathing in large amounts may cause central nervous system depression.

Supporting Data

Acute	Oral	No evidence of oral toxicity for the ingredients.
	Dermal	No evidence of dermal toxicity for the ingredients.
	Inhaled	Inhalation may cause asphyxiation in high concentrations. Low toxicity - LC ₅₀ > 5 mg/L (rat). Butane and propane are simple asphyxiants.
	Eye	The mixture is not considered an eye irritant. However exposure to expanding gas may cause frostbite.
	Skin	The mixture is not considered a skin irritant. However exposure to expanding gas may cause frostbite.
Chronic	Sensitisation	No evidence of sensitisation.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present in the mixture at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive toxicant.
	Systemic	No ingredient present at concentrations > 1% is considered a systemic toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This gas is not considered ecotoxic.

Supporting Data

Aquatic	No data for mixture is available. Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is > 100 mg/L.
Bioaccumulation	This product is a gas and will not accumulate in the soil or water or cause long term problems.
Degradability	Volatilization is expected to be primary fate process.
Soil	This product is a gas and is not considered to be harmful in the soil environment.
Terrestrial vertebrate	The mixture is not considered to be harmful towards terrestrial vertebrates.
Terrestrial invertebrate	Butane is not considered toxic towards terrestrial invertebrates.
Biocidal	Not biocidal

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice

Contaminated packaging

2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment. Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. The canisters cannot be recycled. Send to landfill or similar.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	2037	Proper shipping name:	RECEPTACLES, SMALL, CONTAINING GAS (gas cartridges) without a release device, non-refillable
Class(es)	2.1	Packing group:	NA
Precautions:	Flammable gas	Hazchem code:	NA
IATA			
UN number:	2037	Proper shipping name:	RECEPTACLES, SMALL, CONTAINING GAS (gas cartridges) without a release device, non-refillable
Class(es)	2.1	Packing group:	NA
Precautions:	Flammable gas	Guide no:	115
IMDG:			
UN number:	2037	Proper shipping name:	RECEPTACLES, SMALL, CONTAINING GAS (gas cartridges) without a release device, non-refillable
Class(es)	2.1	Packing group:	NA
Precautions:	Flammable gas	EMS codes	F-D, S-U



15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002532, Gases Under Pressure Mixtures (Flammable) Group Standard 2020. All Ingredients appear on the NZIoC.

Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency response plan	Required if > 300kg is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Not required.
Signage	Required if > 250kg is stored.
Location compliance certificate	Required if > 100kg is stored.
Flammable zone	Must be established if >100kg is stored in any one location.

Fire extinguisher

If > 50kg present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR002532, Gases Under Pressure Mixtures (Flammable) Group Standard 2020 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations.
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
STOT RE	Specific Target Organ Toxicity – Repeated Exposure
STOT SE	Specific Target Organ Toxicity – Single Exposure
TWA	Time Weighted Average – generally referred to as WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	EU ECHA, ingredients SDS's, ChemIDplus, Suppliers SDS

Review

Date	Reason for review
June 2026	Not applicable – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 21 1040951.

