



PRODUCT SAFETY DATA SHEET

BUTANE AND MIXTURES

Specific risk : EXTREMELY FLAMMABLE

1. Product identification

Name Butane, Super butane, Butane-Propane mix
 Nature LPG
 Presentation

Containers	Gas contained		
	Butane	Super Butane	But.-Pro .mix
Campingaz 901 -904 -907	X		
Campingaz GT 106 (90 g)		X	
Campingaz C 206 (190 g)	X or	X	
Coleman 190 (190 g)		X	
Coleman CV 100 (97 g)			X
Coleman CV 250 (220 g)			X
Coleman CV 500 (440 g)			X
Campingaz CV 270 (230 g)	X or	X	
Campingaz CV 360 (52 g)		X	
Campingaz CV 470 (450 g)	X or	X	
Campingaz CG 1750 (170 g)			X
Campingaz CG 3500 (350 g)			X
Taymar-Campingaz T 1750 (170 g)			X
Taymar-Campingaz T 3500 (350 g)			X
Taymar-Campingaz RF 80 (185 g)	X		
Taymar-Campingaz RF 89 (277 g)	X		
Taymar-Campingaz RF 90 (350 g)	X		
Campingaz CP 250 (250 g)	X		
Flama 190 (190 g)	X		
Primus 220293 (450 g)		X	

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2 - Composition/Information on components

Nature Preparation
 Description Hydrocarbon mixtures mainly containing butanes, butenes, propane and propene, odorised by mercaptan
 Butane: composition in compliance with French decree of 3/9/79 (Pressure at 50°C < 6.9 bar)
 Super butane: mixture of butanes, butenes and propane (approx. 20%)
 Butane-Propane mix : mixture of butanes, butenes and propane (approx. 30 %)
 N° CAS (substance) 685 12 91 4
 N° EINECS 270 990 9

3 - Risk factors:

Butane and its mixtures are manufactured, stored, transported and distributed under pressure in liquefied form.
 In normal conditions, they remain in sealed systems up until their final destruction by combustion (use), and are therefore never handled directly.
The continual confinement of these gases is of utmost importance.
 Nevertheless, certain special precautions are recommended to prevent or deal with their accidental release into the atmosphere, i.e. a leak.



Physical and chemical properties	Extremely flammable In the event of a leak, as gas is heavier than air, it has a tendency, in the absence of ventilation, to accumulate at the lowest possible levels. The intense heating of a container can cause it to rupture, allowing the product to escape; the ignition of vapour can give rise to deflagration or explosion.
Health hazards	In gaseous state, breathing in highly concentrated vapours can cause drowsiness, intoxication, narcosis and, in extreme cases, coma through the rarefaction of oxygen. In liquid state, it can cause cold burns.
Environmental hazards:	Inapplicable in normal use conditions.

4 - First aid

In the event of serious accidents, call a doctor or request emergency medical assistance.

Inhalation: The subject should be taken outdoor and kept in a resting position. If suffering from respiratory difficulties or loss of consciousness, call a doctor immediately and administer respiratory assistance.

Skin Rinse thoroughly with water.

Eyes Rinse thoroughly with water, keep the eye protected and consult a specialist.

Flammation of clothing: Hose down with water.

5 - Fire-fighting measures

Extinguishing means: Recommended: powder, CO₂, spraying with water in certain cases.
Ill-advised : hosing with a concentrated stream of water
Ineffective : foam

Recommendations Incomplete combustion creates toxic CO the inhalation of which is particularly hazardous.
It is dangerous to put out a flame if the leak cannot be completely stopped.

Protection of stocks: As soon as a fire breaks out, evacuate all exposed flammable materials and LPG containers.
Thoroughly cool by spraying with water all containers that cannot be evacuated. Do not hose down with a concentrated stream of water.

Container fire: If a container that is connected to an appliance catches fire, do not throw or turn it upside-down, as this can only exacerbate the problem (spilling of liquid gas or container rupture).
Try to close the valve, protecting your hands and forearms with a wet cloth. If possible, take the container outside without lying it down.
Keep people away.
Never tip a container on fire.

6 - Measures to be taken in case of accidental dispersion

Storage In case of unignited liquid or gas leaks :

- Thoroughly air out the room
- Keep away from all sources of flammation; avoid all electrical switching.
- Avoid contact of the liquefied gas with the skin
- Block off low-level openings in close proximity (vent holes, drain holes)
- Keep people away
- Call on specialised emergency assistance



Container

If the leak cannot be stopped by moving the valve, take the container outdoor, avoiding any impact and dispose of it in a safe area without turning it upside-down.

7 - Handling and storage

Handling

Follow the instructions indicated on the containers.
Use only in well ventilated areas ; do not smoke
Use exclusively with suitable appliances (indication on containers).
Always use the containers in the upright position.
In workshops, avoid the build-up of electrostatic charges.
Never look for a leak with a naked flame. Only soapy water should be used.

Storage

- Store in a well ventilated area, well away from all sources of heat and ignition.
- Do not expose containers to a temperature greater than 50°C
- Do not store below floor level (basement or cellar, for example)
- Store away from low-level points where vapours can accumulate
- Do not store in a vehicle (heating by the sun)
- Avoid contact with strong oxidising agents and keep away from combustible materials.

Observe the regulations in force for storing in large quantities.

8 - Control of exposure

Generally inapplicable

- Odourisation allows a 0.5% gas content in the air to be detected
- If the smell of gas is detected, search for the leak with soapy water before using the Appliance
- Always use in a well ventilated area to allow for the evacuation of fumes and products of combustion (CO, CO2)

Follow the instructions enclosed with the appliance and those indicated on the containers.

9 - Physical and chemical properties

Physical state	Liquid in the container	Gaseous at atmospheric pressure	
Colour	Colourless		
Odour :	Characteristic		
Auto-ignition temperature	approximately 400°C		
Flammability limits lower :	approx. 1.8%	Upper: approx. 8.8%	
Flash point	Non applicable for Liquefied Petroleum Gases		

		Butane	Super butane	Butane-Propane Mix
Boiling To under 1 atm.	approx.	-5°C	-20°C	-25°C
Relative vapour pressure (bar)				
max. at 15°C	approx.	1.7	2.2	2.8
max. at 50°C	approx.	6.9	7.5	8.3
Density (liquid at 50°C)	kg/l min.	0.525	0.515	0.500
Density/air (15°C 1 atm)	approx.	2.01	2	1.95



10 -Stability-reactivity

- Product stable in normal conditions of use
- No known decomposition products
- Explodes or catches fire when exposed to heat or a source of ignition
- Combustion products include nitrogen, carbonic gas and water vapour
- Carbon monoxide (toxic) is released during bad combustion

11 -Toxicology

Severe toxicity

Inapplicable.

LPGs are kept in closed containers until their destruction by combustion and thus the greatest danger is the ignition of vapours in the air following an accidental leak.

Breathing in highly concentrated vapours could result in drowsiness, intoxication or narcosis and, in extreme cases, coma.

In the event of incomplete combustion, the ensuing release of carbon monoxide can cause dizziness, headaches, loss of muscular mobility and coma.

12 - Ecological information

As they evaporate instantly and are only slightly soluble in water, LPGs present no known environmental hazards.

Gas accidentally released into the atmosphere is rapidly diluted and undergoes photochemical decomposition.

13 - Elimination of waste:

- As containers of LPGs always contain flammable vapours, never pierce or burn a cartridge, even when empty .
- Emptying a container from liquefied gas shall only be made by specially trained people and according adapted instructions.
- Observe the regulations in force on waste for the disposal of empty cartridges.

Materials:

CV 360 : aluminium

Other cartridges : steel sheet

Refillable cylinders : steel

14- Product transport

All containers meet the requirements of the transport regulations.

For transporting large quantities, follow the applicable safety regulations (road, sea, air).

Road	ADR	Class 2			
		Enumeration	UNO No.		
	R901, 904, 907 cartridges	2°F 5°F	1965 2037		
		Danger label: No.2.1			
Sea	IMDG	Class	UNO No.		
	R901, 904, 907 cartridges	2.1 2.1	1965 2037		
Air	IATA	Class	UNO No.	Passenger plane	Cargo plane
	R901, 904, 907 cartridges	2.1 2.1	1965 2037	Prior agreement	yes
				Prior agreement	yes



15 -Regulatory information:

Dangerous preparation labelling

Applicable to 1.4.97

Symbol F+ : highly flammable

Phrase R12 : highly flammable

Phrases S2 « Keep out of reach of children », S9 « store in a ventilated place », S16 « Store away from all flames or sources of ignition. Do not smoke » , S33 « Avoid the build-up of electrostatic charges ».

Domestic premises:

refer to national regulations

Caravans:

refer to national regulations

16 -Additional information:

Only to be used for the applications and with the appliances indicated on the containers.

Containers in compliance with existing regulations.

Never refill an empty container.

Safety data sheet established in application of EEC directive 91/155 -All information contained in this sheet is based on our knowledge.