SAFETY DATA SHEET

1. Identification

Product identifier **Butane/Propane Mix**

Other means of identification

SDS number 1007

Recommended use Fuel for portable gas appliances.

Recommended restrictions Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer The Coleman Company, Inc.

Address 3600 N Hydraulic
Wichita, KS 67219
United States

Telephone 1-800-835-3278

E-mail colemanproductsafety@newellco.com

Emergency telephone Call CHEMTREC day or night
USA/Canada - 1.800.424.9300

Newell Australia Pty Ltd.
Level 3, 35 Dalmore Drive
Caribbean Park
Victoria 3179
ABN: 68 075071233
colemanproductsafety@newellco.com
Call CHEMTREC day or night
USA/Canada - 1.800.424.9300

2. Hazard identification

Physical hazards

Flammable gases	Category 1
Gases under pressure	Liquefied gas
Simple asphyxiants	Category 1

Health hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only with adequate ventilation. Do not enter storage areas or confined spaces unless adequately ventilated.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.

Storage Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isobutane		75-28-5	65 - 70
Propane		74-98-6	21 - 25
Butane		106-97-8	7 - 15

Composition comments Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention immediately.

Skin contact Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling. In case of cold burns (frostbite), soak in tepid water and get medical attention.

Eye contact Remove victim immediately from source of exposure. Flush eyes thoroughly with lukewarm water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion Not likely, due to the form of the product.

Most important symptoms/effects, acute and delayed Headache. Dizziness. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water spray. Water fog. High expansion foam. Dry chemical. Carbon dioxide (CO2). Use fire-extinguishing media appropriate for surrounding materials. Do not extinguish burning gas if flow cannot be shut off immediately.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical May form explosive mixtures with air. Gas may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: Carbon oxides.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. Use water spray to cool unopened containers. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.

General fire hazards Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Use water spray to reduce vapours or divert vapour cloud drift. Isolate area until gas has dispersed.

For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Protect containers from physical damage; do not drag, roll, slide, or drop. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

Avoid any uncontrolled release, venting or prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store at temperature below 104°F (40°C). Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Containers should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Isobutane (CAS 75-28-5)	STEL	1000 ppm

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear one or more of the following depending on hazard of task: safety glasses, goggles, faceshield.
Skin protection	
Hand protection	Depending on the task, chemically resistant (exposure to gas), and/or thermally insulated (exposure to liquefied gas) gloves are recommended. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Check with respiratory protective equipment suppliers.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Gas.
Form	Compressed liquefied gas.
Colour	Colourless.
Odour	Faint.
Odour threshold	Not available.
pH	Not applicable.

Melting point/freezing point	-187 °C (-304.6 °F) Propane -160 °C (-256 °F) iso-Butane -138 °C (-216.4 °F) n-Butane
Initial boiling point and boiling range	-42 °C (-43.6 °F) Propane -12 °C (10.4 °F) iso-Butane -1 °C (30.2 °F) n-Butane
Flash point	-104.0 °C (-155.2 °F) Propane -88.0 °C (-126.4 °F) iso-Butane -60.0 °C (-76.0 °F) Closed cup n-Butane
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.8 % v/v n-Butane, iso-Butane 2.2 % v/v Propane
Flammability limit - upper (%)	8.4 % v/v n-Butane, iso-Butane 9.5 % v/v Propane
Vapour pressure	1557 mm Hg @ 68°F/20°C n-Butane 2280 mm Hg @ 68°F/20°C iso-Butane 5625 mm Hg @ 68°F/20°C Propane
Vapour density	1.55 (Air=1) Propane 2.1 (Air=1) n-Butane 2.59 (Air=1) iso-Butane
Relative density	0.501 (H2O=1) Propane (20°C/4°C liquid) 0.578 (H2O=1) iso-Butane, n-Butane (20°C/4°C liquid)
Solubility(ies)	
Solubility (water)	0.01 g/100ml @ 68°F/20°C Propane 3.25 ml/100ml @ 68°F/20°C n-Butane
Partition coefficient (n-octanol/water)	2.36 Propane 2.8 iso-Butane 2.89 n-Butane
Auto-ignition temperature	287 °C (548.6 °F) n-Butane 460 °C (860 °F) iso-Butane 466 °C (870.8 °F) Propane
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Reacts with strong oxidants causing fire and explosion hazard.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Containers may rupture or explode if exposed to heat. Contact with incompatible materials. Do not cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	Strong oxidizing agents such as: Hydrogen peroxide (H2O2). Nitric acid. Sulfuric acid. Chlorine dioxide.
Hazardous decomposition products	Decomposition is not expected under normal conditions of use and storage. In the event of fire: See Section 5.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.
Skin contact	Contact with evaporating liquid may cause frostbite or freezing of skin.
Eye contact	Direct contact with liquefied gas may cause eye damage from frostbite.
Ingestion	Not likely, due to the form of the product.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. Dizziness. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Gas is not likely to cause irritation. Contact with liquefied gas may cause frostbite.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. High concentrations, prolonged or repeated exposure: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue) and/or damage.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	The product is readily biodegradable.
Bioaccumulative potential	The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

2.36, Propane
2.8, iso-Butane
2.89, n-Butane

Mobility in soil	Not relevant, due to the form of the product. Highly volatile, will partition rapidly to air.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Contents under pressure. Do not puncture or incinerate even when empty. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2037
UN proper shipping name	Gas cartridges, (flammable) without a release device, non-refillable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN2037
UN proper shipping name	Gas cartridges, (flammable) without a release device, non-refillable.
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	-
Environmental hazards	No
ERG Code	-
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2037
UN proper shipping name	Gas cartridges, (flammable) without a release device, non-refillable.
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established. Not applicable.

General information Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure adequate ventilation. Ensure compliance with applicable regulations.

SPECIAL PERMIT SP9758.

15. Regulatory information

This product has been classified in accordance with the hazard criteria of 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification Not regulated.

CERCLA Hazardous Substances List

Butane (CAS 106-97-8) Listed.

Propane (CAS 74-98-6) Listed.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053 Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 9-December-2019

Revision date 8-18-2020 (*Update UN Transport name.)

Version No. 05

Disclaimer The Coleman Company Inc cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.