

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : EcoBurner Fuel

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

Use of the substance/mixture : For use ONLY in re-fill of EcoBurner, as directed by EcoBurner Ltd. Directions for use provided in "EcoBurner Quick Start Guide." Use only with approved EcoBurner Devices.
 Use of the substance/mixture : Fuel

1.2.2. Uses advised against

Any other use not specifically described by EcoBurner, Ltd.

1.3. Details of the supplier of the safety data sheet

EcoBurner
 Unit 5 Airside, Gulf Stream Avenue
 Airport Business Park
 Waterford,
 T +353 (0)51 353806 - F +353 (0)51 364067
info@ecoburner.com - www.ecoburner.com

1.4. Emergency telephone number

Emergency number : +1 202 464 2554 (Carechem)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Aerosol 1 H222
 Compressed gas H280
 Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02



GHS04

Signal word (GHS-US) : Danger
 Hazard statements (GHS-US) : H222 - Extremely flammable aerosol
 H280 - Contains gas under pressure; may explode if heated
 Precautionary statements (GHS-US) : P210 - Keep away from heat, open flames, sparks. - No smoking
 P211 - Do not spray on an open flame or other ignition source
 P251 - Pressurized container: Do not pierce or burn, even after use
 P410+P403 - Protect from sunlight. Store in a well-ventilated place
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Exact concentrations withheld as trade secret.

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Name	Product identifier	%	GHS-US classification
n-Butane	(CAS No) 106-97-8	70 – 90	Flam. Gas 1, H220
Propane	(CAS No) 74-98-6	10 – 30	Flam. Gas 1, H220
Isobutane	(CAS No) 75-28-5	1 – 5	Flam. Gas 1, H220

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Artificial respiration and/or oxygen if necessary. Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Thaw frosted parts with lukewarm water. Do not rub affected area. Get medical advice/attention.
- First-aid measures after eye contact : Direct contact with the eyes is likely to be irritating.
- First-aid measures after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

- Symptoms/injuries after inhalation : In high concentrations : Anesthetic effects. Shortness of breath. Inhalation of vapours may cause respiratory irritation. Headache. Dizziness. Nausea.
- Symptoms/injuries after skin contact : May cause moderate irritation. Rapid evaporation of the liquid may cause frostbite.
- Symptoms/injuries after eye contact : This gas is non-irritating; but direct contact with liquefied/pressurized gas or frost particles may produce severe and possibly permanent eye damage from freeze burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry chemical. Foam. Water spray. Water fog.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Extremely flammable aerosol.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Precautionary measures fire : Stop leak if safe to do so.
- Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : No open flames. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

- Protective equipment : Do not breathe aerosol. Refer to section 8.2.
- Emergency procedures : Stop leak, if possible without risk. Keep upwind. Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not breathe aerosol. Refer to section 8.2.
- Emergency procedures : Stop leak if safe to do so. Eliminate every possible source of ignition. Evacuate unnecessary personnel. Keep upwind.

6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Do not discharge into drains or the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Eliminate all ignition sources.

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Methods for cleaning up : Notify environmental authorities.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Pressurized container: Do not pierce or burn, even after use

Precautions for safe handling : Do not spray on an open flame or other ignition source.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Avoid static electricity discharges. No flames, no sparks. Eliminate all sources of ignition

Storage conditions : Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place.

Incompatible materials : Heat sources. Direct sunlight.

Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Fuel.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

n-Butane (106-97-8)		
ACGIH	ACGIH TWA (ppm)	1000 ppm
ACGIH	ACGIH STEL (ppm)	1000 ppm
OSHA	Not applicable	

Isobutane (75-28-5)		
ACGIH	ACGIH TWA (ppm)	1000 ppm
ACGIH	ACGIH STEL (ppm)	1000 ppm
OSHA	Not applicable	

Propane (74-98-6)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m ³)	1800 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

Personal protective equipment : Avoid all unnecessary exposure. Accidental release of the contents: avoid leaks.

Hand protection : None under normal use. It is a good industrial hygiene practice to minimize skin contact. In case of repeated or prolonged contact wear gloves. Insulated gloves.

Eye protection : None under normal use. In case of aerosol production: protective goggles.

Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection. Use self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Aerosol.

Colour : Colourless

Odour : Sweet petroleum

Odour threshold : No data available

pH : No data available

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Melting point	: No data available
Freezing point	: No data available
Boiling point	: -42.2 - -0.5 °C (-1.1 - 31.1 °F)
Flash point	: -104.4 °C (-156 °F (estimated))
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: > 1
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: 40 PSIG @ 70 °F
Relative density	: 0.567
Relative vapour density at 20 °C	: 1.886
Solubility	: Water: 0.008 % @ 70 °F
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: 0.084 - 0.14 cP liquid
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content : 100 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Overheating.

10.5. Incompatible materials

Strong oxidizers. Alkali. Strong mineral acids.

10.6. Hazardous decomposition products

Carbon monoxide. Mixture of hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

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Symptoms/injuries after inhalation	: In high concentrations : Anesthetic effects. Shortness of breath. Inhalation of vapours may cause respiratory irritation. Headache. Dizziness. Nausea.
Symptoms/injuries after skin contact	: May cause moderate irritation. Rapid evaporation of the liquid may cause frostbite.
Symptoms/injuries after eye contact	: This gas is non-irritating; but direct contact with liquefied/pressurized gas or frost particles may produce severe and possibly permanent eye damage from freeze burns.
Likely routes of exposure	: Inhalation; Skin and eye contact.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Container under pressure. Do not drill or burn even after use. Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN1075 Petroleum gases, liquefied (or Liquefied petroleum gas), 2.1
UN-No.(DOT)	: UN1075
Proper Shipping Name (DOT)	: Petroleum gases, liquefied or Liquefied petroleum gas
Department of Transportation (DOT) Hazard Classes	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Hazard labels (DOT)	: 2.1 - Flammable gas



Additional information

Other information : No supplementary information available.

ADR

Transport document description	: UN 1950 AEROSOLS, 2.1, (D)
Class (ADR)	: 2 - Gases
Classification code (ADR)	: 5F
Danger labels (ADR)	: 2.1 - Flammable gases



Tunnel restriction code (ADR)	: D
LQ	: 11
Excepted quantities (ADR)	: E0

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Transport by sea

UN-No. (IMDG) : 1950
Proper Shipping Name (IMDG) : AEROSOLS
Class (IMDG) : 2 - Gases

Air transport

UN-No.(IATA) : 1950
Proper Shipping Name (IATA) : Aerosols, flammable
Class (IATA) : 2

SECTION 15: Regulatory information

15.1. US Federal regulations

n-Butane (106-97-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Isobutane (75-28-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Propane (74-98-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

n-Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Isobutane (75-28-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Propane (74-98-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

n-Butane (106-97-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Isobutane (75-28-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Propane (74-98-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol 1 H222;H229

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F+; R12

15.2.2. National regulations

n-Butane (106-97-8)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on Taiwan National Chemical Inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Chinese Catalog of Hazardous Chemicals.
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

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Isobutane (75-28-5)

Listed on KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on Taiwan National Chemical Inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Propane (74-98-6)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on Taiwan National Chemical Inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Chinese Catalog of Hazardous Chemicals.
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

15.3. US State regulations

n-Butane (106-97-8)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Isobutane (75-28-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

Propane (74-98-6)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Indication of changes	: Original Document.
Data sources	: ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database . Kriester Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. NIOSH Occupational Health Guide for chemical Substances - Vol. II, September, 1978. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html . OSHA 29CFR 1910.1200 Hazard Communication Standard.
Abbreviations and acronyms	: CAS (Chemical Abstracts Service) number. ATE: Acute Toxicity Estimate. CLP: Classification, Labelling, Packaging. EC50: Environmental Concentration associated with a response by 50% of the test population. GHS: Globally Harmonized System (of Classification and Labeling of Chemicals). LD50: Lethal Dose for 50% of the test population. NOEC: No Observable Effect Concentration. OSHA: Occupational Safety & Health Administration. PNEC: Predicted No Effect Level. STEL: Short Term Exposure Limits. TSCA: Toxic Substances Control Act. TWA: Time Weight Average.
Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging.

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Full text of H-phrases:

Compressed gas	Gases under pressure : Compressed gas
Flam. Aerosol 1	Flammable aerosols, Category 1
Flam. Gas 1	Flammable gases, Category 1
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H280	Contains gas under pressure; may explode if heated

NFPA health hazard

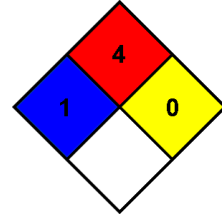
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS US (GHS HazCom 2012)

SDS Prepared by:

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product