Product Name: BIC EZ Reach Lighter

PRODUCT DATA SHEET

Date Prepared:
June 28, 2023 Version 4

This product is a consumer product and is not subject to the requirements of OSHA 29 CFR 1910.1200. Nonetheless, this SDS, including the hazard identification in accordance with 29 CFR 1910.1200, is provided for the information of product users.

SECTION 1 –IDENTIFICATION	
Product Name:	BIC EZ Reach Lighter
Synonyms:	None
Product Use:	Device intended to produce a flame.
Manufacturer/ Vendor Information:	Supplier information: BIC Corporation One BIC Way, Suite 1 Shelton, CT 06484 USA (203) 783-2000 Emergency Telephone Number: (203) 783-2412 For Transportation Emergencies call CHEMTREC: (800)424-9300 BIC Inc. 155 Oakdale Road Downsview, Ontario M3N 1W2 CANADA (416) 742-9173 x288 (Business hours)
SDS Contact:	Product Safety
Telephone Number:	(203) 783-2412

SECTION 2 – HAZARD(S) IDENTIFICATION	
Classification of the fuel in Accordance with 29 CFR § 1910.1200:	Flammable Gas – Category 1 Gas under Pressure – Liquified Gas
Signal Word (fuel):	Danger
Hazard Statements (fuel):	Extremely flammable gas Contains gas under pressure; may explode if heated. Packaged product exhibits a lesser hazard due to fuel containment within the product and protection of the packaging.
Symbols (fuel):	
Precautionary Statements (product):	Prevention: Keep away from heat/sparks/open flames/hot surfaces. Response: Eliminate all ignition sources if safe to do so. In case of fire: Extinguish with water.

	Storage: Protect from sunlight.
Any Hazards Not Otherwise Classified (fuel):	High vapor concentrations may cause headache, nausea, dizziness, drowsiness, incoordination and unconsciousness [Central Nervous System (CNS) depression]. Contact with liquefied gas may cause cold burns or frostbite to skin or eyes. Repeated inhalation of high concentrations of isobutane may cause weak cardiac sensitization.
For more information refer to Section 11 of this SDS	

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

CAS No.	Chemical Name	Percentage
75-28-5	Isobutane	**100**

SECTION 4 – FIRST-AID MEASURES

Eyes:	In the event of contact with liquefied isobutane, immediately flush with lukewarm gently flowing water for at least 15 minutes. If frostbite has occurred, DO NOT attempt to rewarm. Cover both eyes with a sterile dressing. DO NOT allow victim to drink alcohol or smoke. Quickly transport victim to an emergency care facility.
Skin:	In the event of contact with liquefied isobutane causing frostbite to the skin: DO NOT attempt to rewarm the affected area on site. DO NOT rub area or apply dry heat. Gently remove clothing or jewelry that may restrict circulation. Carefully cut around any clothing that sticks to the skin, and remove the rest of the garment. Loosely cover the affected area with a sterile dressing. DO NOT allow victim to drink alcohol or smoke. Quickly transport victim to emergency care facility. As quickly as possible, remove contaminated clothing, shoes, and leather goods (e.g., watchbands, belts) as the product is extremely flammable.
Inhalation:	The fuel inside the lighter is extremely flammable. Take proper precautions (e.g., remove any sources of ignition). If breathing has stopped, trained personnel should begin artificial respiration (AR) or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Immediately transport victim to an emergency care facility.
Ingestion:	Ingestion of this product is unlikely. Ingestion of isobutane is also unlikely.
Most Important Symptoms and Effects, Both Acute and Delayed	
Symptoms/Injuries after Inhalation:	Inhalation of high concentrations of gas can cause CNS effects and weak cardiac sensitization.
Symptoms/Injuries after Skin Contact:	Direct contact with liquefied gas may cause cold burns/frostbite.
Symptoms/Injuries after Eye Contact:	Direct contact with liquefied gas may cause cold burns/frostbite and permanent eye damage.
Symptoms/Injuries after Ingestion:	Ingestion of this product is unlikely. Ingestion of isobutane is also unlikely.
Indication of Any Immediate Medical Attention and Special Treatment Needed	
Treat symptomatically.	

SECTION 5 – FIRE-FIGHTING MEASURES	
Extinguishing Media:	Suitable: Water, foam, dry chemical powder, carbon dioxide.
Conditions of Flammability:	Fire characteristics of packaged product are heavily influenced by packaging materials. The fuel within the lighter is EXTREMELY FLAMMABLE. In the event of damage to the lighter product, small quantities of extremely flammable isobutane gas can be released. Provide adequate ventilation and keep ignition sources far removed.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, smoke and irritating gases may be formed on combustion.
Special Firefighting Procedures:	Wear self-contained breathing apparatus and protective clothing to prevent inhalation and contact with skin and eyes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	In the event of damage to the lighter product, small quantities of extremely flammable isobutane gas can be released. Provide adequate ventilation and keep ignition sources far removed.
Methods for Containment and Cleaning Up:	Clean up spilled material and repackage for proper waste management.

SECTION 7 – HANDLING AND STORAGE	
Handling	
Precautions for Safety Handling:	Take care to prevent damage to the product.
Storage	Store away from heat and sources of ignition.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION		
Control Parameters: Packaged product exhibits a lesser hazard due to fuel containment within the product and protection of the packaging.		
Chemical Name	CAS Number	Exposure Limits
Isobutane	75-28-5	ACGIH: (TLV-STEL) 1000 ppm (butane, all isomers) TLV Basis – Critical Effects: Central Nervous system impairment NIOSH (REL-TWA) 800 ppm (1900 mg/m^3)
Personal protective equipment is not necessary under normal conditions of use.		
Engineering Measures:	For normal application, special ventilation is not necessary.	
Eye Protection:	Not required under normal use conditions.	
Hand Protection:	None necessary under normal use conditions.	
Skin and Body Protection:	None necessary under normal use conditions.	
Respiratory Protection:	None necessary under normal use conditions.	

ACGIH = American Conference of Governmental Industrial Hygienists
NIOSH = National Institute for Occupational Safety and Health
REL = Recommended Exposure Limit
TLV = Threshold Limit Value
TWA= Time-Weighted Average
STEL = Short-Term Exposure Limit

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES	
Appearance & Physical State:	The product is an article – a device consisting of plastic and metal components containing a clear colorless liquefied gas.
Odor (fuel):	Sweet petroleum odor (isobutane) and slight plastic odor (casing)
Odor Threshold (fuel):	Odor threshold is not available.
pH (fuel):	Not applicable
Melting Point (fuel):	-138.3°C (-216.9°F) – Isobutane fuel
Boiling Point (fuel):	-11.7°C (11°F) – Isobutane fuel
Flash Point (fuel):	-83°C (-117°F) (Open Cup)
Evaporation Rate (fuel):	>>1 (immediately evaporates) (Ethyl ether=1) gas
Flammability (fuel):	Fuel within lighter is extremely flammable gas
Flammability Limits in Air (fuel) Lower (LFL): Upper (UFL):	 1.8% by volume – Isobutane 8.4% by volume – Isobutane
Vapor Pressure (fuel):	31 PSIG @ 70°F (21°C) – Isobutane
Vapor Density (fuel):	2.006 @ 60°F (15.6°C) (air =1) – Isobutane
Density/Specific Gravity (fuel):	0.5626 @ 60°F (15.6°C)
Solubility in Water (fuel):	Very slightly soluble (0.008%) (isobutane). Insoluble (casing).
Octanol/ Water Partition Coefficient (fuel):	Log $P_{(OCT)}$ = 2.76 – Isobutane
Auto-ignition Temperature (fuel):	860°F (460°C) Closed Cup – Isobutane
Decomposition Temperature (fuel):	Not available
Viscosity (fuel):	Not applicable

SECTION 10 – STABILITY AND REACTIVITY	
Reactivity	This product is stable under the normal conditions of use.
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Will not undergo hazardous polymerization.
Conditions to Avoid:	Avoid heat sources, sparks or flames.
Incompatible Materials:	Avoid strong oxidizing agents.
Hazardous Decomposition Products:	None expected under the normal conditions of use.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry: Gas poses opportunity for skin contact, inhalation, and eye contact.

Acute Toxicity

Product data:
Not available.

Ingredient data:

Chemical	CAS#	Route & Species	Value
Isobutane	75-28-5	Inhalation, mouse (male)	LC_{50} 368,000 ppm (36.8%) (4h)
		Inhalation, rat	LC_{50} >13,023 ppm (1.3%) (4h) LC_{50} 570,000 ppm (57%) (15 mins)*

**LC_{50} values obtained with 15-minute exposure durations cannot be reliably converted to 4-hour exposures.*

Eye Irritation:	Not expected to be an eye irritant. Contact with liquefied isobutane may cause cold burns/frostbite and permanent eye damage.
Skin Irritation:	Not expected to be a primary skin irritant. Contact with liquefied isobutane may cause cold burns/frostbite.
Ingestion Effects:	Not applicable. Not an expected route of entry.
Inhalation Effects:	Inhalation of high concentrations can cause CNS effects and weak cardiac sensitization (to adrenaline).
Skin Sensitization:	Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.
Respiratory Tract Sensitization:	Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.
Chronic Toxicity	
Carcinogenicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause cancer. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a carcinogen.
Mutagenicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a mutagen.
Reproductive Toxicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause teratogenicity and/or embryotoxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a teratogen/embryotoxin.
Other Chronic Effects:	Exposure to isobutane is not known to cause chronic toxic effects of sufficient severity to threaten life or cause serious impairment.

SECTION 12 – ECOLOGICAL INFORMATION	
Ecotoxicity:	Not Available
Persistence/ Degradability:	Not Available
Bioaccumulation:	Not Available
Mobility:	Not Available
Other Adverse Effects:	Not Available

SECTION 13 – DISPOSAL CONSIDERATIONS	
Waste Disposal Method:	In accordance with local, provincial/territorial or federal guidelines and regulations.

SECTION 14 – TRANSPORT INFORMATION

	Shipping name	UN Number	Hazard Class	PG
DOT (US)	LIGHTERS	1057	2.1	--

DOT= Department of Transport

SECTION 15 – REGULATORY INFORMATION

OSHA Classification: (OSHA Hazard Communication Standard (29 CFR §1910.1200))

The isobutane fuel within the product has been classified in accordance with the hazard criteria of the OSHA's HCS/HazCom 2012 and the SDS contains all the information required by the 29 CFR § 1910.1200. The packaged product exhibits a lesser hazard due to the predominance of packaging.

Hazard Ratings for the Isobutane Fuel

	NPCA/HMIS	NFPA 704
Health:	1	1
Flammability:	4	4
Reactivity:	0	0

NPCA/HMIS – National Paint and Coatings Association/ Hazardous Materials Identification System
NFPA – National Fire Protection Association

1. The components in this product are listed on the TSCA Inventory or are otherwise exempt from TSCA.
2. Some plastics in this product may form formaldehyde gases during their combustion. Formaldehyde is considered to be a carcinogen by the State of California (California Proposition 65) if exposure to it exceeds the No Significant Risk Level (NSRL)- Safe Harbor Level (40 micrograms/day).
3. ASTM F400-04 (Standard Consumer Safety Specification for Lighters).
4. ISO 9994 (Lighters – Safety Specification).
5. U.S. Safety Standard for Cigarette Lighters, 16 CFR Part 1210 (July 12, 1994).

SECTION 16 – OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Preparation Date: June 28, 2023
Last Version: May 13, 2022

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