



MSDS - GAS LIGHTERS (IMO 2.1, UN No. 1057)
(Based on ISO 11014-1)

Date of issue:	5.1.2018	Page: 1 / 5
Version no:	1.0	
Product name:	Refillable electronic lighter	

SECTION_1. PRODUCT AND COMPANY IDENTIFICATION		
1.1	Product identifier:	
	Product name:	Refillable gas lighter (IMO 2.1 UN 1057)
1.2	Relevant identified uses of the substance:	Disposable gas lighters contain a liquefied petroleum gas (LPG) Intended for sale to consumers.
1.3	Details of the supplier of the safety data sheet	
1.3.1	Supplier identification:	
	Name or trade name:	HELFARE, s.r.o.
	Registered office/place of business:	Břeclavská 138/5, 691 52 KOSTICE, Czech Republic
	Telephone:	+420 606 263 853
	Telephone 2:	+420 723 231 772
	E-mail:	helfare@email.cz
	Identify No:	0285959408
	Name of the competent person responsible for the Safety Data Sheet elaboration	Olga Helešicová, helfare@email.cz
1.4	Emergency telephone number:	112 (24 hour service) – applicable to EU countries only. +420 606 263 853
SECTION_2. HAZARDS IDENTIFICATION		
2.1	Emergency Overview	Content flammable compressed gas
		Extremely flammable
		The lighter may burst individually when exposed to high temperatures such as open flame. The gas causes drowsiness and is an asphyxiant when exposed to in large quantities; however, lighters are not a health hazard. Lighters do not present a health hazard. Risk of explosion of individual lighter when submitted to unforeseeable abnormal shock, unforeseeable abnormal friction.
SECTION_3. COMPOSITION/INFORMATION ON INGREDIENTS		
3.1	Substance/Preparation	Preparation
3.2		Disposable gas lighters contain a liquefied petroleum gas (LPG)
	Ingredients Name	AS plastic casing with Liquefied butane gas - mixture
	Ingredients Name (Liquefied butane gas)	Propane - content 10-15%, CAS No.74-98-6, EC No.200-827-9 Isobutane - content 30-40%, CAS No.75-28-5, EC No.200-857-2 Butane - content 50-55%, CAS No.106-97-8, EC No.203-448-7
		Risk phrases: F+, R12
SECTION_4. FIRST AID MEASURES		
4.1	Inhalation:	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility / consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.

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		Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
4.2	Skin and eyes contact:	For liquid spillage – flush with water for at least 15 minutes.
4.4	Ingestion:	Ingestion is not considered a potential route of exposure
4.5	Notes to physician	Treat symptomatically

SECTION_5. FIRE FIGHTING MEASURES

5.1	Flammable class:	Extremely flammable
5.1.1	Specific hazards:	Exposure to fire may cause containers to rupture/explode
5.1.2	Hazardous combustion products:	Incomplete combustion may form carbon monoxide
5.2	Extinguishing media:	All known extinguish agents can be used
5.3	Specific METHODS:	If possible, stop flow of products. Move away from the container and cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/ explosive re-ignition may occur. Extinguish any other fire.
	Special protective equipment for fire FIGHTERS:	In confined space use self-contained breathing apparatus.

SECTION_6. ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.
6.2	Environmental precautions	Try to stop release. Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous.
6.3	Clean up methods	Ventilate area.
6.4		

SECTION_7. HANDLING AND STORAGE

7.1	Handling	Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire, minimize ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Do not puncture or incinerate container. High-pressure gas. Protect container from physical damage.
7.2	Storing	Segregate from oxidant gases and other oxidants in store. Keep container below 50°C in a well-ventilated place.

SECTION_8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Exposure guidelines	
8.2	Ingredients name	OEL
8.2.1	Propane (CAS: 74-98-6)	MAK: 1000 PPM, 1800 MG/M3, IV (1993) OSHA PEL: TWA 1000 PPM (1800 MG/M3) NIOSH REL: TWA 1000 PPM (1800 MG/M3) NIOSH IDLH: 2100 PPM LEL
8.2.2	Isobutane (CAS:75-28-5)	MAK: 1000 PPM, 2350 MG/M3 (STEL), IV (MAK 1991) OSHA PEL: NONE NIOSH REL: TWA 800 PPM (1900 MG/M3) NIOSH IDLH: NO DATA



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8.2.3	Butane (CAS:106-97-8)	TVL© - TWA (PPM): 800 OEL (UK)-LTEL (PPM):600 OEL (UK)-STEL (PPM):750 VME – FRANCE (PPM): 800 MAK – GERMANY (PPM): 1000
	Personal protection:	Ensure adequate ventilation
		Do not smoke while handling product

SECTION_9. PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information of basic physical and chemical properties	
	Physical state at 20°C	Liquefied gas
	Color	Colorless gas
	Odour:	Sweetish. Poor warning properties at low concentrations.
	Molecular weight:	58
	Melting point/freezing point:	-138°C
	Initial boiling point and boiling range:	-0,5°C
	Critical temperature:	152°C
	Vapor pressure, 20°C :	2 bar.
	Relative density, gas (air=1):	2,1
	Relative density, liquid (water=1):	0,6
	Solubility in water (mg/l):	88
	Flammability range (vol% in air):	1,5 to 8,5
	Auto-ignition temperature:	365°C
9.2	Other information:	Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION_10. STABILITY AND REACTIVITY

10.1	Reactivity:	Can form explosive mixture with air.
10.2	Incompatible materials:	Extremely reactive or incompatible with oxidizing agents.

SECTION_11. TOXICOLOGICAL INFORMATION

11.1	Acute toxicity data	
	Toxicity data available for this product:	
	Isobutane (cas: 75-28-5)	Inhalation, rat: LC50=57 pph/15M
	Butane (cas: 106-97-8)	RTECS#: EJ4200000 Inhalation, mouse: LC50=680000 mg/m ³ /2H

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		Inhalation, rat: LC50=658000 mg/m ³ /4H
	Chronic effects on humans:	Cause damage to the following organs: central nervous system (CNS).
	Other toxic effects on humans	No specific information is available in our database regarding the other toxic effects of this material for humans.
	Specific effects	
	Carcinogenic effects	No known significant effects or critical hazards.
	Mutagenic effects	No known significant effects or critical hazards.
	Reproduction toxicity	No known significant effects or critical hazards.

SECTION_12. ECOLOGICAL INFORMATION

12.1	Products of degradation:	These products are carbon oxides (CO, CO ₂)
	Toxicity of the products of biodegradation:	The product itself and its products of degradation are not toxic
12.2	Environmental fate	Data not available.
12.3	Environmental hazards	No known significant effects or critical hazards.
12.4	Toxicity to the environment:	Data not available.

SECTION_13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal Method	Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.
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SECTION_14. TRANSPORT INFORMATION

14.1	Regulatory Information	UN No.	Proper Shipping Name	Class	Packing Group	Label
	DOT Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	
	TDG Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	
	ADR/RID Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	
	IMDG Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	

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	IATA-DGR Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	
	ADG Class	UN1057	LIGHTERS CONTAINING FLAMMABLE GAS	2.1	NOT APPLICABLE (GAS)	

SECTION_15. REGULATORY INFORMATION

15.1	EC Classification:	F+, R12
15.2	EC Labeling	
		Symbol(s): F+: Extremely flammable
		R Phase(s): R12: Extremely flammable
		S Phases(s): S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition – No smoking.

SECTION_16. OTHER INFORMATION

16.1	Risk phases in section 3:	R12 Extremely flammable
16.2	Issu Date:	5.1.2018
16.3	Declaration	This information and these recommendations are offered in good faith and believe to be correct as of the data hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.