

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 00005
Product Name: Isopentane
Company Name:

Company Name: Gas Innovations
18005 E. Hwy 225
La Porte, TX 77571
Web site address: www.gasinnovations.com **Phone Number:** +1 (281)471-2200
Emergency Contact: 3E (within United States) +1 (866)303-2640
Information: Infotrac (outside of United States) +1 (352)323-3500

2. HAZARDS IDENTIFICATION

Flammable Gases: Category 1
Specific Target Organ Toxicity (single exposure): Category 3
Aspiration Toxicity: Category 1
Aquatic Toxicity (Chronic): Category 2

Symbol:**GHS Signal Word:** Danger

GHS Hazard Phrases: H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.
OSHA-H01 - May displace oxygen and cause rapid suffocation
CGA-HG04 - May form explosive mixtures with air
GHS Precaution Phrases: P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P261 - Avoid breathing gas/vapors/spray.
P280 - Wear eye protection, face protection, protective gloves, protective clothing
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.

GHS Response Phrases: P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 - Do NOT induce vomiting.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention
P331 - Do NOT induce vomiting
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381 - Eliminate all ignition sources if safe to do so
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

GHS Storage and Disposal Phrases:

P391 - Collect spillage.

P403+233 - Store container tightly closed in well-ventilated place.

P501 - Dispose of contents/containers in accordance with local/regional/national/international regulations.

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

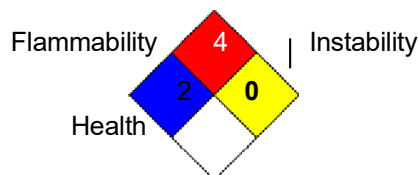
CGA-PG10 - Use only with equipment rated for cylinder pressure

CGA-PG14 - Approach suspected leak area with caution

CGA-PG21 - Open valve slowly

Use a back flow preventative device in the piping.

Do not open the valve until connected to equipment prepared for use. Close valve after each use and when empty.

Additional Hazards Information**Hazard Rating System:****NFPA:**

Special Hazard

Potential Health Effects (Acute and Chronic):

Isobutylene is a simple asphyxiant. Inhalation of high concentrations may cause rapid respiratory tract irritation, lightheadedness, central nervous system and depression in high concentrations. May sensitize the heart muscle. Chronic exposure may affect the liver.

Inhalation:

May be harmful if inhaled. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Isobutylene is a simple asphyxiant.

Skin Contact:

May be harmful if absorbed through the skin. May cause skin irritation. Prolonged or repeated skin contact may cause defatting and dermatitis.

Eye Contact:

May cause eye irritation.

Ingestion:

May be fatal if swallowed and enters airways. May cause lung damage. May cause irritation of the digestive tract. May cause headache. May cause nausea and vomiting.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
78-78-4	Isopentane	100 %

4. FIRST AID MEASURES**Emergency and First Aid Procedures:**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In Case of Inhalation:

If breathed in, move person into fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, oxygen should be administered by qualified personnel. Do not administer Epinephrine or other heart stimulants. Call a physician.

In Case of Skin Contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical advice/attention.

In Case of Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. After 5 minutes, if appropriate, remove contact lenses and continue flushing eyes for an additional 15 minutes. Get medical attention immediately.

In Case of Ingestion:

Do NOT induce vomiting or give anything by mouth to an unconscious or convulsing person. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Pt:	<-51 °C (<-60 °F)
Method Used:	Closed Cup
Explosive Limits:	Lower level: 12.5% (Volume in air) Upper level EL: 7.6% (Volume in air)
Autoignition Pt:	420 °C (788 °F)
Suitable Extinguishing Media:	The only safe way to extinguish an Isopentane fire is to stop the flow. Fires may be brought under control using foam, carbon dioxide, or a dry chemical fire extinguisher.
Fire Fighting Instructions:	<p>Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Personnel may have to wear approach-type protective suits and positive pressure self-contained breathing apparatus. Firefighters' turnout gear may be inadequate. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.</p> <p>Cylinders exposed to fire may rupture with violent force. Extinguishing surrounding fire and keep cylinders cool by applying water from a maximum possible distance with a water spray. Avoid spreading burning liquid with water used for cooling. Keep work areas free of hot metal surfaces and other sources of ignition.</p>
Flammable Properties and Hazards:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Use proper personal protective equipment as indicated in Section 8.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Steps To Be Taken in Case Material Is Released or Spilled:	Shut off all sources of ignition. Remove hot metal surfaces. Ventilate the area. For controlling larger flows, personnel may have to wear approach-type protective suits and self-contained breathing apparatus. Flush spilled material into suitable retaining areas or containers with large quantities of water. Small amounts of spilled material may be absorbed into an appropriate absorbent.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	<p>Avoid inhalation of vapor or mist. Keep away from heat, sparks and flame. Keep away from sources of ignition - No smoking. Use spark-proof tools and explosion proof equipment. Use in a closed system. Secure the cylinder to prevent it from falling or being knocked over. Install check valves or traps to prevent suck back to the cylinder. Ground all lines and equipment. Leak check the lines and equipment. Have an emergency plan covering steps to be taken in the event of an accidental release.</p> <p>Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents.</p>
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**Precautions To Be Taken
in Storing:**

Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat or ignition. Store away from oxidizers. Do not store in direct sunlight.

Other Precautions:

When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit. Do not eat, drink or smoke when using this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	NIOSH IDLH
78-78-4	Isopentane	No	TLV: 1000 ppm	Europe TWA: 1000ppm Mexico TWA: 600ppm

**Respiratory Equipment
(Specify Type):**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Eye Protection:

Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder change out or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Gloves:

Wear appropriate protective gloves to prevent skin exposure. Impermeable gloves.

Other Protective Clothing:

Impermeable aprons. Wear appropriate protective clothing to prevent skin exposure.

**Engineering Controls
(Ventilation etc.):**

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wear safety shoes while handling containers

**Work/Hygienic/Maintenance
Practices:**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas [X] Liquid [] Solid		
Appearance:	Colorless Liquid		
Odor	Gasoline-like		
Specific Volume:	0.19 gal/lb. @ 1 atm, 68F.		
Freezing Point:	-160 °C (-256 °F)		
Boiling Point:	28 °C (82°F)		
Decomposition Temperature:	NA		
Autoignition Pt:	420 °C (788 °F)		
Flash Pt:	-51 °C (-60 °F)		
Method used:	Closed Cup		
Explosive Limits:	Lower-level: 12.5% (Volume in air)		Upper-level EL: 7.6% (Volume in air)
Specific Gravity (Water = 1):	0.6201 g/cm @ 20 °C		
Density:	Heavier than air		
Bulk density:	NA		
Vapor Pressure (vs. Air or mm Hg):	595 mm Hg (at 21.1 °C)		
Vapor Density (air=1)	2.5		
Evaporation Rate:	NA		
Solubility in Water:	Insoluble		

Saturated Vapor Concentration:	NA
Viscosity:	0.214 cp
pH:	NA
Percent Volatile:	NA
VOC / Volume:	NA
Particle Size:	NA
Heat Value:	NA
Corrosion Rate:	NA
Molecular Formula:	C ₅ H ₁₂
Molar mass:	72.2 g/mol

10. STABILITY AND REACTIVITY

Reactivity:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Heat, flames and sparks. No smoking. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.
Incompatibility Materials to Avoid:	Oxidizing agents, Acids, Bases, Selected amines, air.
Hazardous Decomposition or Byproducts:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Epidemiology:	No information available.
Teratogenicity:	No information available.
Reproductive Effects:	No information available.
Mutagenicity:	No information available.
Neurotoxicity:	No information available.
CAS#	Acute toxicity
78-78-4	LCLo, Inhalation, Species: Mouse, 419 g/m ³ , 2H.
Carcinogenicity:	NTP - No IARC Monographs - No OSHA Regulated - No

12. ECOLOGICAL INFORMATION

General Ecological Information:	Environmental: No information available. Physical: No information available. Other: Do not empty into drains.
Results of PBT and vPvB assessment:	No data available.
Persistence and Degradability:	Not expected to undergo hydrolysis in the environment. May biodegrade in water
Bio accumulative Potential:	Bioconcentration potential in aquatic organisms is moderate based on a BCF value of 70.
Mobility in Soil:	No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Do not attempt to dispose of residual or unused quantities. Return container to supplier. Dispose of contents/containers in accordance with local/regional/national/international regulations. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into areas where there is a risk of forming an explosive mixture with air.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping name: Isopentane.
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA number: UN1265
Labels:



Sea Transport:

Transport document description (IMDG):
UN-No. (IMDG): UN1265
Proper Shipping Name (IMDG): Chemical Under Pressure, Flammable, N.O. S
Class: 2 - Gases

Air Transport:

Transport document description (IATA):
UN-No. (IATA): UN1265
Proper Shipping Name (IATA): Chemical Under Pressure, Flammable, N.O. S
Class (IATA): 2.1 - Gases: Flammable

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
78-78-4	Isopentane			

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78-78-4	Isopentane

Other US EPA or State Lists

TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1064; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: Yes; MN: No;

CAS #	Hazardous Components (Chemical Name)
78-78-4	Isopentane

International Regulatory Lists

Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1265; Australia ICS: Yes; New Zealand IOC: Yes; China: Yes; Philippines: Yes; TH -TECI: Yes; TW: Yes; CN: Yes; VN (Draft): Yes;

16. OTHER INFORMATION

Revision Date: 07/31/2024

Additional Information About This**Product:****NFPA Ratings:**

No data available.

0= Minimal Hazard
1= Slight Hazard
2= Moderate Hazard
3= Serious Hazard
4= Severe Hazard

Company Policy or Disclaimer:

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