

**MATERIAL SAFETY DATA SHEET**

Isobutylene Mixture



File No.: 1040

**Isobutylene Mixture:**  
(Isobutylene in a Nitrogen or Air Balance Gas)  
**Isobutylene / Oxygen / Nitrogen**

**1. Chemical Product and Company Identification**

**SpecAir Specialty Gases, Chemicals & Technology**  
22 Albiston Way  
Auburn, ME  
04210

**TELEPHONE NUMBER:** 800-292-6218  
**FAX NUMBER:** 207-777-6215  
**E-MAIL:** [info@SpecAir.com](mailto:info@SpecAir.com)

**24-HOUR EMERGENCY NUMBER:** 1-800-535-5053

**PRODUCT NAME:** Isobutylene Mixture  
**CHEMICAL NAME:** Isobutylene, Nitrogen, Oxygen  
**COMMON NAMES/ SYNONYMS:** Isobutylene in Air, Isobutylene in Nitrogen  
**TDG (Canada) CLASSIFICATION:** 2.2  
**WHIMIS CLASSIFICATION:** A

**2. Composition / Information on Ingredients**

	% VOLUME	PEL-OSHA2	TLV-ACGIH3	LD50 OR LC50 Route/Species
Isobutylene Formula: C <sub>4</sub> H <sub>8</sub> CAS Number: 115-11-7 RTECS#: UDO8900000	0.0001% to 0.9%	None	None	Not Available
Oxygen Formula: O <sub>2</sub> CAS # 7782-44-7 RTECS#: RS206000	19.5% to 23.5%	None	None	Not Available
Nitrogen Formula: N <sub>2</sub> CAS: 7727-37-9 RTECS#: QW9700000	76.5% to 99.9999%	None Established	None Established Simple Asphyxiant	Not Available

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

Isobutylene is a simple hydrocarbon and can cause irritation and central nervous system depression at high concentrations. Use only with adequate ventilation. Contents under pressure. Avoid heat and flames. Protect containers from physical damage. This mixture is non-flammable. Contents under pressure. Use and store below 125°F (52°C).

**ROUTE OF ENTRY:**

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
Yes	No	Yes	Yes	No

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## HAZARDS IDENTIFICATION CONTINUED

### CARCINOGENICITY:

**NTP:** No

**IARC:** No

**OSHA:** No

### Eye Effects:

Irritation may occur. Contact with rapidly expanding gas near the point of release may cause frostbite.

### Skin Effects:

Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white and blistering.

### Ingestion Effects:

None known. Ingestion is unlikely as product is a gas at room temperature.

### Inhalation Effects:

Product is relatively nontoxic. Simple hydrocarbons can irritate the eyes, mucous membranes and respiratory system at high concentrations.

Inhalation of high concentrations of Isobutylene may cause dizziness, disorientation, incoordination, narcosis, nausea or narcotic effects.

### NFPA Hazard Codes

Health:	1
Flammability:	0
Reactivity:	0

### HMIS Hazard Codes

Health:	1
Flammability:	0
Reactivity:	3

### Rating System

0=	No Hazard
1=	Slight Hazard
2=	Moderate Hazard
3=	Serious Hazard
4=	Severe Hazard

## 4. FIRST AID MEASURES

### Eyes:

Never introduce oil or ointment into the eyes without medical advice! Flush eyes with cool water for 15 minutes. If pain is present, or frostbite is suspected refer the victim to an ophthalmologist for further treatment and follow up.

### Skin:

Remove contaminated clothing and wash affected area with soap and water. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. If irritation persists or frostbite is suspected, seek medical attention.

### Ingestion:

Product is a gas.

### Inhalation:

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO THIS PRODUCT. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Conscious persons should be assisted to an uncontaminated area and be treated with supplemental oxygen. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area and be given artificial respiration and oxygen at the same time.

## 5. FIRE-FIGHTING MEASURES

### Fire and Explosion Hazards:

The majority of this product constitutes air. Isobutylene is present in concentrations below the Lower Explosive Limits (LEL). Containers may explode when exposed to heat or flames.

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**FIRE-FIGHTING MEASURES CONTINUED**

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**Extinguishing Media:**

Water spray to keep cylinders cool. Extinguishing agent appropriate for the combustible material.

**Fire Fighting Instructions:**

Continue to cool heat or flame exposed containers until well after the flames are extinguished.

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**6. ACCIDENTAL RELEASE MEASURES**

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Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1 or calls your closest Maine Oxy / SpecAir location.

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**7. HANDLING AND STORAGE**

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Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 1250 F. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a "first in, first out" inventory system to prevent full cylinders being stored for excessive period of time.

For additional recommendations, consult Compressed Gas Association's Pamphlets P-1 and G-2. Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Engineering Controls:**

Use local exhaust ventilation as necessary to maintain atmospheric oxygen levels above 19.5% and control air contaminants to below acceptable exposure guidelines.

**Eye/Face Protection:**

Safety goggles or glasses as appropriate for the job.

**Skin Protection:**

Protective gloves made of suitable material appropriate for the job.

**Other/General Protection:**

Safety shoes, emergency eyewash station.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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<b>PARAMETER:</b>	<b>VALUE:</b>
Physical state	: Gas
Evaporation point	: N/A
pH	: N/A
Odor and appearance	: Colorless gas with a slight odor of burning coal.

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**10. STABILITY AND REACTIVITY**

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**Stability:**

Stable

**Incompatible Materials:**

None known.

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## STABILITY AND REACTIVITY CONTINUED

### Hazardous Decomposition Products:

Carbon Monoxide

### Hazardous Polymerization:

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

No chronic effects data for Isobutylene is given in the Registry of Toxic Effects of Chemical Substances (RTECS) or Sax, Dangerous Properties of Industrial Materials, 7th ed.

## 12. ECOLOGICAL INFORMATION

Product does not contain Class I or Class II ozone depleting substances. Not highly toxic. Will not bioconcentrate.

## 13. DISPOSAL INFORMATION

Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place, to Maine Oxy / SpecAir for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in accordance with local regulations, or returned to Maine Oxy / SpecAir.

## 14. TRANSPORT INFORMATION

	<b>United States DOT</b>	<b>Canada TDG</b>
<b>Proper Shipping Name:</b>	Compressed Gas N.O.S. (Isobutylene, Air)	Compressed Gas N.O.S. (Isobutylene, Air)
<b>Hazard Class:</b>	2.2	2.2
<b>Identification Number:</b>	UN1956	UN1956
<b>Shipping Label:</b>	Non-Flammable Gas	Non-Flammable Gas

## 15. REGULATORY INFORMATION

### SARA Title III Notification and Information:

Isobutylene is listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds

### SARA Title III – Hazard Classes:

Acute Health hazard Sudden Release of Pressure Hazard

### SARA Title II – Section 313 Supplier Notification:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

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**16. OTHER INFORMATION**

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Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply (Amendment) Regulation 1996. The information is based on the best knowledge of SpecAir Specialty Gases and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.