



**Material Safety Data Sheet**  
**Benzene-isobutanol reagent**

**Section 1 - Chemical Product and Company Identification**

**MSDS Name:**

Benzene-isobutanol reagent

**Catalog Numbers:**

LC11665

**Synonyms:**

**Company Identification:**

LabChem, Inc.  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

**Section 2 - Composition, Information on Ingredients**

CAS#	Chemical Name:	Percent
71-43-2	Benzene	50
78-83-1	Isobutyl alcohol	50

**Section 3 - Hazards Identification**

**EMERGENCY OVERVIEW**

*Appearance: Colorless*

*Warning! Cancer hazard. May cause irritation with possible injury by all exposure routes.*

*Flash Point: -11°C.*

*Target Organs: none known.*

**Potential Health Effects**

**Eye:**

May cause moderate eye irritation.

**Skin:**

May cause mild skin irritation.

**Ingestion:**

May cause headache, nausea, fatigue, and dizziness.



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#### Inhalation:

May cause burning sensation to mucous membranes, eyes, skin, nasal passages.

#### Chronic:

May cause dermatitis and conjunctivitis. Prolonged skin exposure may cause dermatitis with drying, cracking skin. Prolonged inhalation may affect central nervous system, cause anemia, leukemia. Repeated ingestion may affect kidneys, gastrointestinal tract. Prolonged inhalation may cause auditory nerve damage, vertigo.

## Section 4 - First Aid Measures

#### Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

#### Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

#### Ingestion:

Get medical aid at once. If vomiting occurs, keep head lower than hip to prevent aspiration. If victim is unconscious, perform gastric lavage or emesis followed by a saline cathartic.

#### Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

#### Notes to Physician:

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

#### General Information:

Vapors can travel to a source of ignition and flashback. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Move container if possible, avoid breathing vapors or dust. Dangerous fire/negligible explosion hazard when exposed to heat or flame.

#### Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

#### Autoignition Temperature:

498°C ( 928.40°F)

#### Flash Point:

-11°C ( 12.20°F)

#### NFPA Rating:

CAS # 71-43-2 health-2; flammability-3; reactivity-0

CAS # 78-83-1 health-1; flammability-3; reactivity-0

#### Explosion Limits:

Lower: 1.2      Upper: 7.8

## Section 6 - Accidental Release Measures

#### General Information:

Use proper personal protective equipment as indicated in Section 8.



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### Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal.

## Section 7 - Handling and Storage

### Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

### Storage:

Store capped at room temperature. Protect from heat and incompatibles.

## Section 8 - Exposure Controls, Personal Protection

### Engineering Controls:

Provide local exhaust or general dilution ventilation.

### Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Benzene	0.5 ppm TWA; 2.5 ppm STEL; skin - potential for cutaneous absorption	0.1 ppm TWA; NIOSH Potential Occupational Carcinogen - see Appendix A	10 ppm TWA (apply only to exempt industry segments); C 25 ppm; 1 ppm TWA; 5 ppm STEL; 0.5 ppm TWA action limit; Cancer hazard; Flammable (see 2);
Isobutyl alcohol	50 ppm TWA	50 ppm TWA; 150 mg/m <sup>3</sup> TWA	100 ppm TWA; 300 mg/m <sup>3</sup> TWA;

### OSHA Vacated PELs

Benzene: 10 ppm TWA (unless specified in 1910.1028)

Isobutyl alcohol: 50 ppm TWA; 150 mg/m<sup>3</sup> TWA

## Personal Protective Equipment

### Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

### Skin:

Wear appropriate protective gloves to prevent skin exposure.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

### Respirators:

Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode. Use under fume hood.

## Section 9 - Physical and Chemical Properties

**Physical State:** Clear liquid

**Color:** Colorless

**Odor:** Aromatic odor-solvent odor



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**pH:** No information found.  
**Vapor Pressure:** No information found.  
**Vapor Density:** No information found.  
**Evaporation Rate:** No information found.  
**Viscosity:** No information found.  
**Boiling Point:** No information found.  
**Freezing/Melting Point:** No information found.  
**Decomposition Temperature:** No information found.  
**Solubility in water:** Slightly soluble.  
**Specific Gravity/Density:** No information found.  
**Molecular Formula:** No information found.  
**Molecular Weight:** No information found.

## Section 10 - Stability and Reactivity

### Chemical Stability:

Stable under normal temperatures and pressures.

### Conditions to Avoid:

Ignition sources, heat.

### Incompatibilities with Other Materials

None reported.

### Hazardous Decomposition Products

Oxides of carbon.

### Hazardous Polymerization

Has not been reported

## Section 11 - Toxicological Information

### RTECS:

CAS# 71-43-2: CY1400000.

CAS# 78-83-1: NP9625000.

### LD50/LC50:

CAS# 71-43-2:

Inhalation, mouse: LC50 = 9980 ppm

Inhalation, rat: LC50 = 10000 ppm/7H

Oral, mouse: LD50 = 4700 mg/kg

Oral, rat: LD50 = 930 mg/kg

Skin, rabbit: LD50 = >9400 mg/kg.

CAS# 78-83-1:

Oral, rat: LD50 = 2460 mg/kg

Skin, rabbit: LD50 = 3400 mg/kg.

### Carcinogenicity:

CAS# 71-43-2

ACGIH: A1-confirmed human carcinogen

California: carcinogen; initial date 2/27/87

NIOSH: occupational carcinogen



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NTP: Known carcinogen

OSHA: Select carcinogen

IARC: Group 1 carcinogen

CAS# 78-83-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

#### Epidemiology:

Benzene is a known carcinogen.

#### Teratogenicity:

See RTECS.

#### Reproductive:

See RTECS.

#### Mutagenicity

See RTECS.

#### Neurotoxicity

## Section 12 - Ecological Information

No information found.

## Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

## Section 14 - Transport Information

### US DOT

**Shipping Name:** Flammable liquid, n.o.s.  
(Benzene, isobutanol)

**Hazard Class:** 3

**UN Number:** UN1993

**Packing Group:** PG II

## Section 15 - Regulatory Information

### US Federal

#### TSCA

CAS# 71-43-2 is listed on the TSCA Inventory.

CAS# 78-83-1 is listed on the TSCA Inventory.

#### SARA Reportable Quantities (RQ)

CAS# 71-43-2: final RQ = 10 pounds (4.54 kg); receives an adjustable RQ of 10 pounds based on

CAS# 78-83-1: final RQ = 5000 pounds (2270 kg)

#### CERCLA/SARA Section 313

This material contains Benzene (CAS# 71-43-2, 50%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.



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### OSHA - Highly Hazardous

None of the components are on this list.

### US State

#### State Right to Know

Benzene can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Isobutyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

#### California Regulations

WARNING: This product contains Benzene, a chemical known to the state of California to cause birth defects or other reproductive harm.

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### European/International Regulations

#### Canadian DSL/NDSL

CAS# 71-43-2 is listed on Canada's DSL List.

CAS# 78-83-1 is listed on Canada's DSL List.

#### Canada Ingredient Disclosure List

CAS# 71-43-2 is listed on Canada's Ingredient Disclosure List.

CAS# 78-83-1 is listed on Canada's Ingredient Disclosure List.

## Section 16 - Other Information

MSDS Creation Date: November 26, 1998

Revision Date: August 22, 2006

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