



## Section 1 - Chemical Product and Company Identification

**Product Name** Sec-Butyl Alcohol extrapure AR, ExiPlus, Multi-Compendial, 99.5%  
**Product Code** 99336  
**CAS No** 78-92-2  
**Use for** Laboratory Chemicals.  
**Company Name** Sisco Research Laboratories Pvt. Ltd.  
**Address** 608, B Wing, Satellite Gazebo, Andheri Ghatkopar Link Road,  
Andheri (E), Mumbai - 400 099, India

## Section 2 - Composition/Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
78-92-2	sec-Butanol	<=100	201-158-5

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

*Flammable. Irritating to eyes and respiratory system. Vapours may cause drowsiness and dizziness.*

#### Potential Health Effects

**Eye:** Causes eye irritation.  
**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.  
**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.  
**Inhalation:** Causes respiratory tract irritation. May be harmful if inhaled. Inhalation of vapors may cause drowsiness and dizziness.  
**Chronic:**

## Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  
**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
**Ingestion:** Get medical aid. Wash mouth out with water.  
**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:**

## Section 5 - Fire Fighting Measures



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- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire.
- Extinguishing Media:** Use water spray to cool fire-exposed containers. Water may be ineffective. Use water fog, dry chemical, carbon dioxide, or regular foam.

## Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

## Section 7 - Handling and Storage

- Handling:** Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing.
- Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. May form explosive peroxides on prolonged storage.

## Section 8 - Exposure Control / Personal Protection



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### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

CAS# 78-92-2:

United Kingdom, WEL - TWA: 100 ppm TWA; 308 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 150 ppm STEL; 462 mg/m<sup>3</sup> STEL

United States OSHA: 150 ppm TWA; 450 mg/m<sup>3</sup> TWA

Belgium - TWA: 100 ppm VLE; 307 mg/m<sup>3</sup> VLE

France - VME: 100 ppm VME; 300 mg/m<sup>3</sup> VME

Germany: 100 ppm TWA; 300 mg/m<sup>3</sup> TWA

Japan: 100 ppm OEL; 300 mg/m<sup>3</sup> OEL

Malaysia: 100 ppm TWA; 303 mg/m<sup>3</sup> TWA

Netherlands: 150 ppm MAC; 450 mg/m<sup>3</sup> MAC

Russia: 10 mg/m<sup>3</sup> TWA (vapour)

Spain: 100 ppm VLA-ED; 308 mg/m<sup>3</sup> VLA-ED

### Personal Protective Equipment

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Boiling Point:</b>	99 deg C @760mmHg ( 210.20°F)
<b>Freezing/Melting Point:</b>	-115 deg C ( -175.00°F)
<b>Solubility in water:</b>	125 g/l (20°C)
<b>Specific Gravity/Density:</b>	0.800
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>10</sub> O
<b>Molecular Weight:</b>	74.12

## Section 10 - Stability and Reactivity



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**Chemical Stability:** Stable under normal temperatures and pressures. This material may be sensitive to peroxide formation.

**Conditions to Avoid:** Incompatible materials, ignition sources.

**Incompatibilities with Other Materials** Ignition sources, acids, acid chlorides, acid anhydrides.

**Hazardous Decomposition Products** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:** CAS# 78-92-2: EO1750000

**LD50/LC50:** RTECS:

**CAS# 78-92-2:** Inhalation, rat: LC50 = 48500 mg/m<sup>3</sup>/4H;  
Oral, rabbit: LD50 = 4893 mg/kg;  
Oral, rabbit: LD50 = 4900 mg/kg;  
Oral, rat: LD50 = 2193 mg/kg;  
Oral, rat: LD50 = 6200 mg/kg;  
Skin, rat: LD50 = >2 gm/kg;  
Other: Skin, rat: LD50 > 2000 mg/kg

**Carcinogenicity:** sec-Butanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** See actual entry in RTECS for complete information. Mutagenicity: Ames-test: negative.

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Fathead Minnow: LC50: 3670 mg/L; 96h; .  
Daphnia: Daphnia: EC50: 3750 mg/L; 24h; .  
Bacteria: Pseudomonas putida: EC50: 500 mg/L; 16h; .

**Other:** Readily biodegradable.  
Log POW: 0.61

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

<b>Shipping Name:</b>	BUTANOLS	BUTANOLS	BUTANOLS
<b>Hazard Class:</b>	3	3	3
<b>UN Number:</b>	1120	1120	1120
<b>Packing Group:</b>	III	III	III

## Section 15 - Regulatory Information



**Product Code** 99336

### **European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 10 Flammable.

R 36/37 Irritating to eyes and respiratory system.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 7/9 Keep container tightly closed and in a well-ventilated place.

S 13 Keep away from food, drink and animal feeding stuffs.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 78-92-2: 1

Canada

CAS# 78-92-2 is listed on Canada's DSL List

### **US Federal**

TSCA

CAS# 78-92-2 is listed on the TSCA Inventory.

### **Section 16 - Other Information**

Sisco Research Laboratories Pvt. Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.