

DATE: 03/26/98

ACCT: 742982001

PO NBR: N/A

CAT NO: A3971

INDEX: N/A

**** MATERIAL SAFETY DATA SHEET ****

Isobutyl Alcohol
11840

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Isobutyl Alcohol
Catalog Numbers: AC412650040, AC412650200, AC412660040, S79832, A397 1, A397 4, A397-1, A397-4, A397J4, S76776

Synonyms:
1-Hydroxymethylpropane; Isobutanol; Isopropylcarbinol;
2-Methyl-1-Propanol.

Company Identification: Fisher Scientific

1 Reagent Lane

Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For international CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
78-83-1	ISOBUTYL ALCOHOL	98	201-148-0
Hazard Symbols: XN F			
Risk Phrases: 10 20			

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: colorless. Flash Point: 82 deg F
Warning: Flammable liquid. May cause skin irritation. May cause
digestive tract irritation. May cause severe eye irritation and
possible injury. May cause liver and kidney damage.
Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: May cause severe eye irritation. May result in corneal injury.

Skin: May cause mild skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and
diarrhea. May cause liver and kidney damage. May cause central
nervous system depression, characterized by excitement, followed by
headache, dizziness, and nausea. Advanced stages may
include unconsciousness, coma and possible death due to
respiratory failure.
May cause headache, muscle weakness and incoordination, and
confusion.

Inhalation:

Inhalation of high concentrations may cause central nervous system
effects characterized by headache, dizziness, unconsciousness and
coma. May cause respiratory tract irritation. May cause corneal
abnormalities and loss of appetite and weight.

Chronic:

No information found.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes,
occasionally lifting the upper and lower lids. Get medical aid
immediately.

Skin: Immediately flush skin with plenty of soap and water for at least 15
minutes while removing contaminated clothing and shoes. Get medical
aid if irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-4 cupsful of milk or water.
Never give anything by mouth to an unconscious person. Get medical
aid immediately.

Remove from exposure to fresh air immediately. If not breathing,
give artificial respiration. If breathing is difficult, give oxygen.
Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

No specific antidote exists.

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**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in
pressure demand, MSHA/NIOSH (approved or equivalent), and full
protective gear. Exposed to a source of ignition, and flash
point. Fire can travel along the surface of the liquid and
mixtures at temperatures above the flashpoint.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or
alcohol-resistant foam.

Autoignition Temperature: 780 deg F (415.56 deg C)

Flash Point: 82 deg F (27.78 deg C)

NFPA Rating: health-1; flammability-3; reactivity-0

Explosion Limits, Lower: 1.7

Upper: 10.6

**** 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., dry sand or earth), then
place into a chemical waste container. Remove all sources of
ignition.

**** SECTION 7 - HANDLING AND STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and
wash before reuse. Use with adequate ventilation. Ground and bond
containers when transferring material. Use spark-proof tools and
explosion proof equipment. Avoid contact with skin and eyes. Empty
containers retain product residue, (liquid and/or vapor), and can be
dangerous. Avoid ingestion and inhalation. Do not pressurize, cut,
weld, braze, solder, drill, grind, or expose empty containers to
heat, sparks or open flames.

Storage:

Keep away from sources of ignition. Store in a cool, dry,
well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne
concentrations below the permissible exposure limits.

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
ISOBUTYL ALCOHOL	50 ppm; 152 mg/m ³	50 ppm TWA; 150 mg/m ³ TWA; 1600 ppm IDLH	100 ppm TWA; 300 mg/m ³ TWA

OSHA Vacated PELs:
ISOBUTYL ALCOHOL:
50 ppm TWA; 150 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical
safety goggles as described by OSHA's eye and face
protection regulations in 29 CFR 1910.133.

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 29CFR
1910.134. Always use a NIOSH-approved respirator when
necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:

Liquid

Appearance:

colorless

Odor:

mild odor

pH:

Not available

Vapor Pressure:

12.2 mm Hg @ 25C

Vapor Density:

2.6 (air=1)

Evaporation Rate:

0.8 (butyl acetone=1)

Viscosity:

4 cP @ 20C

Boiling Point:

226 deg F

Freezing/Melting Point:

-162 deg F

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Other Information: FLASHPOINT 28 C

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA

Other Information: FLASHPOINT 28 C

CAS# 78-83-1 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 78-83-1: Effective Date: March 7, 1986; Sunset Date: March 7, 1999
Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
CAS# 78-83-1: export notification required - Section 4

None of the chemicals in this material have a SNUR under TSCA.

SARA
Section 302 (RQ)

SARA Codes
None of the chemicals in this product have a SARA Code.

Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class I Ozone depleters.

This material does not contain any Class 2 Ozone depleters.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous

Substances under the CWA.
None of the chemicals in this product are listed as Priority

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

under the CWA.
OSHA:

None of the chemicals in this product are considered highly by OSHA.

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ISOBUTYL ALCOHOL can be found on the following state right to know

ists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

One of the chemicals in this product are listed.

Green international negotiations
 European Labeling in accordance with EC Directives
 Hazard Symbols: XN F
 Risk Phrases: R 10 Flammable, R 20 Harmful by inhalation.
 Safety Phrases: S16 Keep away from sources of ignition - No

smoking.
GK (Water Danger/Protection)

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

CAS# 78-83-1 is not listed on Canada's Ingredient

CAS# 78-83-1.: OEL-AUSTRALIA:TWA 50 ppm (150 mg/m3). OEL-AUS-
post-exposure limits
100 ppm (300 mg/m3). OEL-BELGIUM:TWA 50 ppm (152 mg/m3). OEL-

TEL 50 ppm (150 mg/m³);Skin. OEL-FRANCE:TWA 50 ppm (150 mg/m³)
RMANY:TWA 100 ppm (300 mg/m³). OEL-JAPAN:TWA 50 ppm (150 mg/m³)

HE NETHERLANDS: TWA 50 ppm (150 mg/m³). OEL-THE PHILIPPINES: TWI (300 mg/m³). OEL-RUSSIA: TWA 50 ppm; STEL 10 mg/m³; Skin. OEL-SWITZERLAND: TWA 50 ppm (150 mg/m³). OEL-UK: TWA 50 ppm (150 mg/m³).

D: TWA 50 ppm (150 mg/m³); STEL 100 ppm (300 mg/m³). OEL-UNITED TWA 50 ppm (150 mg/m³); STEL 75 ppm. OEL IN BULGARIA, COLOMBIA

CGI TLV

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the possibility of being damaged.