



# Fisher Scientific

Part of Thermo Fisher Scientific

## Material Safety Data Sheet

Creation Date 13-Sep-2010

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Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	<b>Isoamyl alcohol</b>
<b>Cat No.</b>	<b>A393-4; A393-500; BP1150-500</b>
<b>Synonyms</b>	3-Methyl-1-butanol; Isopentyl alcohol; Isobutyl carbinol (Certified/Molecular Biology)
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b>	<b>Emergency Telephone Number</b>
Fisher Scientific	CHEMTREC®, Inside the USA: 800-
One Reagent Lane	424-9300
Fair Lawn, NJ 07410	CHEMTREC®, Outside the USA: 703-
Tel: (201) 796-7100	527-3887

### 2. HAZARDS IDENTIFICATION

#### WARNING!

#### Emergency Overview

Flammable liquid and vapor. Harmful by inhalation. Irritating to eyes and respiratory system. Aspiration hazard if swallowed - can enter lungs and cause damage. Repeated exposure may cause skin dryness or cracking.

**Appearance** Clear

**Physical State** Liquid

**odor** Characteristic

**Target Organs** Eyes, Skin, Respiratory system, Liver, Kidney

#### Potential Health Effects

#### Acute Effects

#### Principle Routes of Exposure

**Eyes**  
**Skin**

Irritating to eyes.

May cause irritation. May be harmful in contact with skin. Repeated exposure may cause skin dryness or cracking.

**Inhalation**  
**Ingestion**

Harmful by inhalation. Irritating to respiratory system.

May be harmful if swallowed. Aspiration hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### **Chronic Effects**

Tumorigenic effects have been reported in experimental animals.. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Haz/Non-haz

Component	CAS-No	Weight %
Isoamyl alcohol	123-51-3	>95

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	43°C / 109.4°F
<b>Method</b>	No information available.
<b>Autoignition Temperature</b>	365°C / 689°F
<b>Explosion Limits</b>	
<b>Upper</b>	8.0 vol %
<b>Lower</b>	1.2 vol %
<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.
<b>Unsuitable Extinguishing Media</b>	No information available.
<b>Hazardous Combustion Products</b>	No information available.
<b>Sensitivity to mechanical impact</b>	No information available.
<b>Sensitivity to static discharge</b>	No information available.

#### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**                      **Health 1**                      **Flammability 2**                      **Instability 0**                      **Physical hazards N/A**

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**                      Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**                      Should not be released into the environment.

**Methods for Containment and Clean Up**                      Soak up with inert absorbent material. Keep in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**7. HANDLING AND STORAGE**

**Handling**                      Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharges.

**Storage**                      Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat and sources of ignition.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Measures**                      Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isoamyl alcohol	TWA: 100 ppm STEL: 125 ppm	(Vacated) TWA: 100 ppm (Vacated) TWA: 360 mg/m <sup>3</sup> (Vacated) STEL: 125 ppm (Vacated) STEL: 450 mg/m <sup>3</sup> TWA: 100 ppm TWA: 360 mg/m <sup>3</sup>	IDLH: 500 ppm TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 450 mg/m <sup>3</sup> STEL: 125 ppm

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Isoamyl alcohol	TWA: 100 ppm TWA: 361 mg/m <sup>3</sup> STEL: 125 ppm STEL: 452 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 125 ppm STEL: 450 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 360 mg/m <sup>3</sup> STEL: 450 mg/m <sup>3</sup> STEL: 125 ppm

**NIOSH IDLH:** *Immediately Dangerous to Life or Health*

**Personal Protective Equipment**

**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear
<b>odor</b>	Characteristic
<b>Odor Threshold</b>	No information available.
<b>pH</b>	7.25 g/l aq.sol.
<b>Vapor Pressure</b>	4 hPa @ 20 °C
<b>Vapor Density</b>	3.04 (Air = 1.0)
<b>Viscosity</b>	4.3 mPa s at 20 °C
<b>Boiling Point/Range</b>	130°C / 266°F
<b>Melting Point/Range</b>	-117°C / -178.6°F
<b>Decomposition temperature</b>	No information available.
<b>Flash Point</b>	43°C / 109.4°F
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	0.800
<b>Solubility</b>	No information available.
<b>log Pow</b>	No data available
<b>Molecular Weight</b>	88.15
<b>Molecular Formula</b>	C <sub>5</sub> H <sub>12</sub> O

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents, Fluorine, oxygen, Reducing agents, Acid anhydrides, Acid chlorides
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions .</b>	None under normal processing..

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isoamyl alcohol	1300 mg/kg ( Rat )	3970 µL/kg ( Rabbit )	Not listed

**Irritation** Irritating to eyes and respiratory system

**Toxicologically Synergistic Products** No information available.

**Chronic Toxicity**

<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product
<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	No information available.
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>Other Adverse Effects</b>	Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.
<b>Endocrine Disruptor Information</b>	No information available

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Isoamyl alcohol	EC50 72 h 493 mg/L EC50 96 h 181 mg/L	LC50 96 h 700 mg/L (rainbow trout)	EC50 = 2500 mg/L 17 h	EC50 48 h 260 mg/L

**Persistence and Degradability**      Readily biodegradable.

**Bioaccumulation/ Accumulation**      No information available

**Mobility**

Component	log Pow
Isoamyl alcohol	1.28

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods**      Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. TRANSPORT INFORMATION

**DOT**

<b>UN-No</b>	UN1105
<b>Proper Shipping Name</b>	PENTANOLS

**14. TRANSPORT INFORMATION**

Proper technical name (3-METHYL-1-BUTANOL)  
 Hazard Class 3  
 Packing Group III

**TDG**

UN-No UN1105  
 Proper Shipping Name PENTANOLS  
 Hazard Class 3  
 Packing Group III

**IATA**

UN-No 1105  
 Proper Shipping Name PENTANOLS  
 Hazard Class 3  
 Packing Group III

**IMDG/IMO**

UN-No 1105  
 Proper Shipping Name PENTANOLS  
 Hazard Class 3  
 Packing Group III

**15. REGULATORY INFORMATION**

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Isoamyl alcohol	X	X	-	204-633-5	-		X	X	X	X	KE-23575 X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313**  
Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**  
Not applicable

**Clean Air Act**  
Not applicable

**OSHA**  
Not applicable

**CERCLA**  
Not Applicable

**California Proposition 65**  
This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Isoamyl alcohol	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

B3 Combustible liquid  
D2B Toxic materials



## 16. OTHER INFORMATION

**Prepared By** Regulatory Affairs  
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**Revision Summary** "\*\*\*\*", and red text indicates revision

### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**