

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Thermo Scientific Isopropyl Alcohol

PART NUMBER: 9990530

GENERAL USE: Chemical processing

PRODUCT DESCRIPTION: Clear flammable liquid, characteristic rubbing alcohol odor

ThermoFisher
SCIENTIFIC

MANUFACTURER'S NAME

Thermo Fisher Scientific

DATE PREPARED: November 30, 2006

SUPERSEDES: New

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ADDRESS (NUMBER, STREET, P.O. BOX)

171 Industry Drive

TELEPHONE NUMBER FOR INFORMATION

(412) 747-4071

(CITY, STATE AND ZIP CODE)

Pittsburgh, PA 15275

COUNTRY

USA

EMERGENCY TELEPHONE NUMBER

CHEM • TEL (800) 255-3924 Outside USA (813) 248-0585

DISTRIBUTOR'S NAME

Same

ADDRESS (NUMBER, STREET, P.O. BOX)

TELEPHONE NUMBER FOR INFORMATION

(CITY, STATE AND ZIP CODE)

COUNTRY

EMERGENCY TELEPHONE NUMBER

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	% (by weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES Full Text Section 16
Isopropyl alcohol	> 99.7%	67-63-0	200-661-7	F, Xi	R-11, 36, 67

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Colorless flammable liquid, potentially hazardous vapors. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard Symbols for this product - F, Xi Risk Phrases - R11, 36, 67

POTENTIAL HEALTH EFFECTS

INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate reddening, swelling and possible necrosis.

EYES: Contact causes severe irritation and pain associated with redness and swelling of the conjunctiva.

INGESTION: Moderately toxic; may cause headache, dizziness, diarrhea and general weakness; large doses may result in red blood cell hemolysis.

CARCINOGENICITY

NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

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SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

INGESTION: Give two glasses of water for dilution; Induce vomiting by sticking fingers down throat; never give anything by mouth to an unconscious person; seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS: Product is flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA

Carbon dioxide, water, water fog, dry chemical, chemical foam.

FIRE FIGHTING PROCEDURES

Self - contained respiratory equipment; cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat.
Caution - material is flammable!

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back.

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes or vapors, oxides of carbon.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - FLAMMABLE - Evacuate and ventilate area; remove all sources of sparks, ignition and open flames; confine and absorb into approved absorbent; place material into approved containers for disposal; do not wash to sewer or waterway.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. CAUTION - FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH			
	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
Isopropyl alcohol	400	980	500	1225	400	983	500	1230

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene, butyl or nitrile rubber gloves with cuffs.

EYE PROTECTION: Chemical splash goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyewash station nearby.

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Clear colorless liquid, characteristic rubbing alcohol odor	VAPOR PRESSURE 32 mm Hg @ 20° C
pH Not applicable	SPECIFIC GRAVITY (WATER = 1) 0.789
BOILING POINT / BOILING RANGE 180° F (82.2° C)	SOLUBILITY IN WATER Complete
FLASH POINT 53° F (11.7° C) TCC	VISCOSITY Like that of water
FLAMMABLE LIMITS LEL: 2.0% UEL: 12.0%	VAPOR DENSITY (AIR = 1) 2.1
AUTOIGNITION TEMPERATURE 750° F (399° C)	EVAPORATION RATE (n-Butyl acetate = 1) 1.4

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures, open flames, sparks.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids.	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.	
HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Isopropyl alcohol	67-63-0 200-661-7	5840 mg / kg Oral - rat	22,500 ppm / 4H Inhalation - rat

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce hazardous vapors in a closed disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway. According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Isopropyl alcohol	IATA HAZARD CLASS / Packaging Group: 3 / II
DOT HAZARD CLASS / Packaging Group: 3 / II	IMDG HAZARD CLASS: 3
REFERENCE: 49 CFR 173.150, .202, .242	RID / ADR Dangerous Goods Code: 3 (3B)
UN / NA IDENTIFICATION NUMBER: UN 1219	UN TDG Class / Packaging Group: 3 / II
LABEL: FLAMMABLE LIQUID	Hazard Identification Number (HIN): 33
HAZARD SYMBOLS: F	

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume or Polymer Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories
Immediate health hazard, fire hazard

313 Reportable Ingredients:
None

CERCLA (USA - Comprehensive Response Compensation and Liability Act)

None

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

There are no chemicals present known to the state of California to cause cancer or reproductive toxicity.

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: B2, D2B

IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index:

VbK Index:

RISK PHRASES:

R11 Highly flammable.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

SYMBOL(S) REQUIRED FOR LABEL

Flammable Irritant



SAFETY PHRASES:

S7 Keep container tightly closed.
S16 Keep away from sources of ignition.
S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

SECTION 16 - OTHER INFORMATION

Notes & full R-Phrase text

R11 Highly flammable.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

HMIS HAZARD RATINGS

HEALTH	1	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	3	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME
PERSONAL PROTECTIVE EQUIPMENT	B	Safety Glasses, Gloves	

REVISION SUMMARY:

This MSDS has been revised in the following sections: No revisions available

MSDS Prepared by: Chem-Tel, Inc.
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Tampa, Florida USA 33602 (800) 255-3924 Outside USA (813) 248-0573

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.