



# Fisher Scientific

Part of Thermo Fisher Scientific

## SAFETY DATA SHEET

Creation Date 03-Jun-2010

Revision Date 27-Feb-2014

Revision Number 1

### 1. Identification

**Product Name** 1-Propanol

**Cat No. :** A414-1; A414-4; A414-20; A414-500; A414RB-50; A414S-4; BP1130-500

**Synonyms** n-Propanol; n-Propyl alcohol (Certified/Peroxide-Free/Sequencing)

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

<b>Company</b> Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	<b>Emergency Telephone Number</b> CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887
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### 2. Hazard(s) identification

#### **Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	

#### **Label Elements**

**Signal Word**  
Danger

**Hazard Statements**  
Highly flammable liquid and vapor  
Causes serious eye damage  
May cause drowsiness or dizziness



### Precautionary Statements

#### Prevention

Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use explosion-proof electrical/ventilating/lighting/equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge  
 Keep cool

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell

#### Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER or doctor/physician

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store in a well-ventilated place. Keep container tightly closed  
 Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

None identified

## 3. Composition / information on ingredients

Component	CAS-No	Weight %
n-Propyl alcohol	71-23-8	> 99

## 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Most important symptoms/effects</b>	Breathing difficulties. . Causes eye burns. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.
<b>Unsuitable Extinguishing Media</b>	Water may be ineffective
<b>Flash Point</b>	15 °C / 59 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	405 °C / 761 °F
<b>Explosion Limits</b>	
<b>Upper</b>	13.7 vol %
<b>Lower</b>	2.2 vol %
<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. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

### 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.

### NFPA

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
1	3	0	N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Avoid release to the environment. See Section 12 for additional ecological information.
<b>Methods for Containment and Clean Up</b>	Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Take precautionary measures against static discharges.

## 7. Handling and storage

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

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Propyl alcohol	TWA: 100 ppm	(Vacated) TWA: 200 ppm (Vacated) TWA: 500 mg/m <sup>3</sup> (Vacated) STEL: 250 ppm (Vacated) STEL: 625 mg/m <sup>3</sup> TWA: 200 ppm TWA: 500 mg/m <sup>3</sup>	IDLH: 800 ppm TWA: 200 ppm TWA: 500 mg/m <sup>3</sup> STEL: 250 ppm STEL: 625 mg/m <sup>3</sup>
<b>Component</b>	<b>Quebec</b>	<b>Mexico OEL (TWA)</b>	<b>Ontario TWA/EV</b>

n-Propyl alcohol 71-23-8 (> 99)	TWA: 200 ppm TWA: 492 mg/m <sup>3</sup> STEL: 250 ppm STEL: 614 mg/m <sup>3</sup> Skin	TWA: 200 ppm TWA: 500 mg/m <sup>3</sup> STEL: 250 ppm STEL: 625 mg/m <sup>3</sup>	TWA: 100 ppm
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Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

**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.
- Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Colorless
<b>Odor</b>	Alcohol-like
<b>Odor Threshold</b>	No information available
<b>pH</b>	7 20% aq. solution
<b>Melting Point/Range</b>	-127 °C / -196.6 °F
<b>Boiling Point/Range</b>	97 °C / 206.6 °F @ 760 mmHg
<b>Flash Point</b>	15 °C / 59 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	13.7 vol %
<b>Lower</b>	2.2 vol %
<b>Vapor Pressure</b>	25 mbar @ 20 °C
<b>Vapor Density</b>	2.07
<b>Relative Density</b>	0.800
<b>Solubility</b>	Miscible with water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	405 °C / 761 °F
<b>Decomposition temperature</b>	No information available
<b>Viscosity</b>	2.2 mPa.s at 20 °C
<b>Molecular Formula</b>	C3 H8 O
<b>Molecular Weight</b>	60.1

## 10. Stability and reactivity

- Reactive Hazard** None known, based on information available
- Stability** Stable under normal conditions.
- Conditions to Avoid** Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
- Incompatible Materials** Strong oxidizing agents, Strong acids

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Propyl alcohol	1870 mg/kg ( Rat )	4049 mg/kg ( Rabbit )	13548 ppm ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Severe eye irritant

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
n-Propyl alcohol	71-23-8	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Central nervous system (CNS)

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
n-Propyl alcohol	Not listed	Pimephales promelas: LC50=4480 mg/L 96h	EC50 = 17700 mg/L 5 min EC50 = 45000 mg/L 5 h EC50 = 8686 mg/L 15 min EC50 = 980 mg/L 12 h	3642 mg/L EC50 = 48 h 3339 - 3977 mg/L EC50 48 h

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

### **Mobility**

Component	log Pow
n-Propyl alcohol	0.34

### 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**

UN-No UN1274  
 Proper Shipping Name N-PROPANOL  
 Hazard Class 3  
 Packing Group II

**TDG**

UN-No UN1274  
 Proper Shipping Name n-Propanol  
 Hazard Class 3  
 Packing Group II

**IATA**

UN-No UN1274  
 Proper Shipping Name n-PROPANOL  
 Hazard Class 3  
 Packing Group II

**IMDG/IMO**

UN-No UN1274  
 Proper Shipping Name N-PROPANOL  
 Hazard Class 3  
 Packing Group II

### 15. Regulatory information

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
n-Propyl alcohol	X	X	-	200-746-9	-		X	X	X	X	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** Occupational Safety and Health Administration  
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
n-Propyl alcohol	X	X	X	-	X

#### U.S. Department of Transportation

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

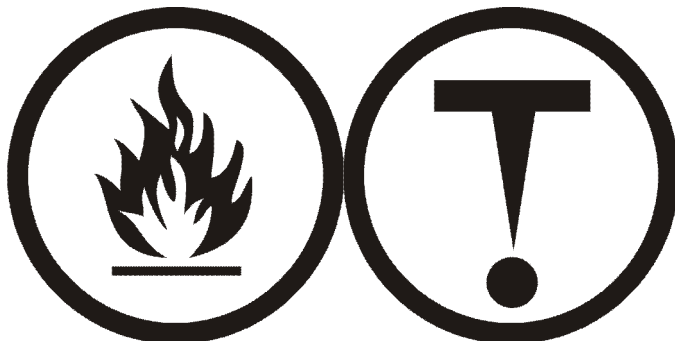
**U.S. Department of Homeland Security**  
This product does not contain any DHS chemicals.

#### Other International Regulations

**Mexico - Grade** Serious risk, Grade 3

**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** B2 Flammable liquid  
D2B Toxic materials



### 16. Other information

**Prepared By** Regulatory Affairs  
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**Creation Date** 03-Jun-2010  
**Revision Date** 27-Feb-2014  
**Print Date** 27-Feb-2014  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

#### 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 SDS**