



# Fisher Scientific

Part of Thermo Fisher Scientific

## Material Safety Data Sheet

Creation Date 27-Apr-2009

Revision Date 04-Jun-2012

Revision Number 4

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Methanol
<b>Cat No.</b>	A408-1; A408-4; A408-4LC; A408-SK4; A411-4; A411-20; A412-1; A412-4; A412-4LC; A412-20; A412-200; A412-200LC; A412-500; A412CU-1300; A412FB-19; A412FB-50; 412FB-115; A412FB-200; A412P-4; A412POP-19; A412POPB-200; 412RB-50; A412RB-115; A412RB-200; A412RS-19; A412RS-28; 412RS-50; 412RS-115; A412RS-200; A412SK-4; A412SS-115; A413-4; A413-20; 413-200; A413-500; A433F-1GAL; A433P-4; A433S-4; A433S-20; A433S-200; A434-20; A450-4; A452-1; A452-4; A452-4LC; A452N-119; A452N-219; A452POP-50; 452POP-200; A452RS-19; A452RS-28; A452RS-50; 452RS-115; A452RS-200; A452SK-1; A452SK-4; A452SS-19; A452SS-28; 452SS-50; A452SS-200; A453-1; A453-1LC; A453-500; A454-1; A454-4; A454-4LC; A454RS-28; A454RS-115; A454RS-200; A454SK-4; A454SS-28; A454SS-200; A455-1; A456-1; A456-4; A456-212; A456-500; A457-4; A935-4; A935RB-200; A947-4; A947POP-200; A947RS-28; A947RS-115; A947RS-200; A947SS-28; A947SS-50; A947SS-115; A947SS-200; BP1105-1; BP1105-4; BP1105SS-19; BP1105SS-28; LCMSKIT; OPTIMAKIT; SC95-1; SW2-1; TIA947-4; TIA947P-200L; HC4001GAL
<b>Synonyms</b>	Methyl alcohol; (Spectranalyzed; Laboratory; Certified ACS; NF; Histological; Pesticide; HPLC; OPTIMA; LC/MS; GC Resolv; Electronic; Low Water; Peroxide-Free/Sequencing)
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b>	<b>Emergency Telephone Number</b>
Fisher Scientific	CHEMTREC®, Inside the USA: 800-424-9300
One Reagent Lane	CHEMTREC®, Outside the USA: 001-703-527-3887
Fair Lawn, NJ 07410	
Tel: (201) 796-7100	

### 2. HAZARDS IDENTIFICATION

## 2. HAZARDS IDENTIFICATION

**DANGER!****Emergency Overview**

Flammable liquid and vapor. Poison, may be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Vapor harmful. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. **WARNING!** This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

**Appearance** Colorless**Physical State** Liquid**odor** Alcohol-like**Target Organs**

Gastrointestinal tract (GI), Central nervous system (CNS), Eyes, Respiratory system, Skin, Optic nerve, Liver, Kidney, spleen, Blood

**Potential Health Effects****Acute Effects****Principle Routes of Exposure****Eyes**

Irritating to eyes.

**Skin**

Toxic in contact with skin. Irritating to skin.

**Inhalation**

Toxic by inhalation. Vapor harmful. May cause irritation of respiratory tract.

**Ingestion**

Poison, may be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects**

Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects. Component substance is listed on California Proposition 65 as a developmental hazard.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions**

Central nervous system disorders. Gastrointestinal tract. Preexisting eye disorders. Skin disorders. Kidney disorders. Liver disorders.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Haz/Non-haz**

Component	CAS-No	Weight %
Methyl alcohol	67-56-1	>95

## 4. FIRST AID MEASURES

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

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.

**Ingestion**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Notes to Physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	12***°C / 53.6°F
<b>Method</b>	No information available.
<b>Autoignition Temperature</b>	455°C / 851°F
<b>Explosion Limits</b>	
<b>Upper</b>	31.00 vol %
<b>Lower</b>	6.0 vol %
<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Use water spray to cool unopened containers.
<b>Unsuitable Extinguishing Media</b>	Water may be ineffective
<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. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

### 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.

<b>NFPA</b>	<b>Health</b> 1	<b>Flammability</b> 3	<b>Instability</b> 0	<b>Physical hazards</b> N/A
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## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Ensure adequate ventilation.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable, closed containers for disposal..

## 7. HANDLING AND STORAGE

<b>Handling</b>	Use only under a chemical fume hood. Use explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Flammables area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Measures

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

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m <sup>3</sup> (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m <sup>3</sup> Skin TWA: 200 ppm TWA: 260 mg/m <sup>3</sup>	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 325 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup> Skin	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 310 mg/m <sup>3</sup>	TWA: 200 ppm STEL: 250 ppm Skin

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

### Personal Protective Equipment

**Eye/face Protection**  
**Skin and body protection**  
**Respiratory Protection**

Tightly fitting safety goggles.  
Antistatic boots. Wear fire/flammable resistant/retardant clothing. Impervious gloves.  
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>	Colorless
<b>odor</b>	Alcohol-like
<b>Odor Threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Vapor Pressure</b>	128 hPa @ 20 °C
<b>Vapor Density</b>	(Air = 1.0)***
<b>Viscosity</b>	0.55 cP at 20 °C
<b>Boiling Point/Range</b>	64.7°C / 148.5°F @ 760 mmHg
<b>Melting Point/Range</b>	-98°C / -144.4°F
<b>Decomposition temperature</b>	No information available.
<b>Flash Point</b>	12***°C / 53.6°F
<b>Evaporation Rate</b>	5.2 (ether = 1)
<b>Specific Gravity</b>	0.791
<b>Solubility</b>	Miscible with water
<b>log Pow</b>	No data available
<b>Molecular Weight</b>	32.04
<b>Molecular Formula</b>	C H4 O

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Heat, flames and sparks.
<b>Incompatible Materials</b>	Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Formaldehyde
<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 (Dust)
Methyl alcohol	5628 mg/kg ( Rat )	15800 mg/kg ( Rabbit )	64000 ppm ( Rat ) 4 h 83.2 mg/L ( Rat ) 4 h

**Irritation** Irritating to eyes and skin

**Toxicologically Synergistic Products** Carbon tetrachloride

### Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization** No information available.

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** Developmental effects have occurred in experimental animals. Component substance is listed on California Proposition 65 as a developmental hazard.

**Teratogenicity** Teratogenic effects have occurred in experimental animals..

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

**Endocrine Disruptor Information** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility**

Component	log Pow
Methyl alcohol	-0.74

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods** Should not be released into the environment.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-

**14. TRANSPORT INFORMATION**

**DOT**

UN-No UN1230  
 Proper Shipping Name METHANOL  
 Hazard Class 3  
 Packing Group II

**TDG**

UN-No UN1230  
 Proper Shipping Name METHANOL  
 Hazard Class 3  
 Subsidiary Hazard Class 6.1  
 Packing Group II

**IATA**

UN-No UN1230  
 Proper Shipping Name METHANOL  
 Hazard Class 3  
 Subsidiary Hazard Class 6.1  
 Packing Group II

## 14. TRANSPORT INFORMATION

### IMDG/IMO

UN-No	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

## 15. REGULATORY INFORMATION

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Methyl alcohol	X	X	-	200-659-6	-		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

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Methyl alcohol	67-56-1	>95	1.0

### SARA 311/312 Hazardous Categorization

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

### Clean Water Act

Not applicable

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-

**OSHA**

Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL
Methyl alcohol	67-56-1	Methanol	-

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methyl alcohol	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 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

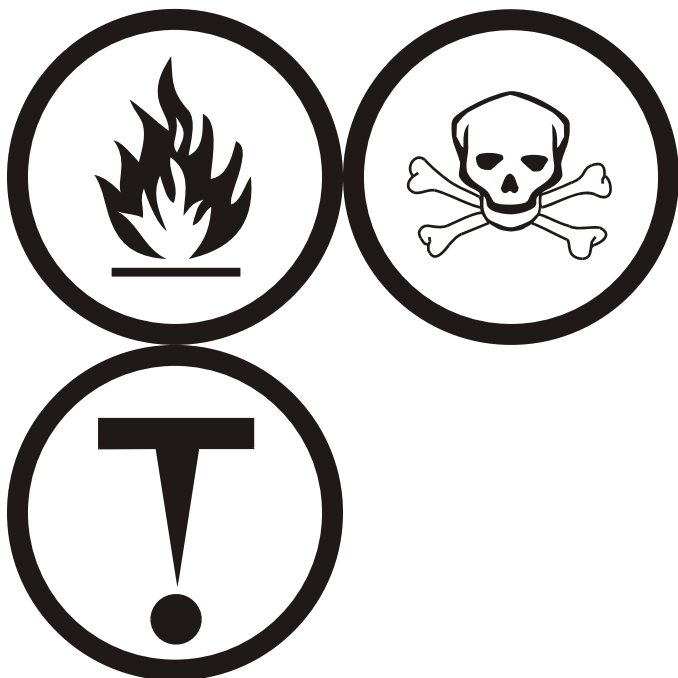
**Canada**

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  
 D1B Toxic materials  
 D2B Toxic materials





## 16. OTHER INFORMATION

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
<b>Creation Date</b>	27-Apr-2009
<b>Print Date</b>	04-Jun-2012
<b>Revision Summary</b>	(M)SDS sections updated 1 3 16

### 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**