



Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Creation Date 27-Apr-2009

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Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Methanol
Cat No.	A408-1; A408-4; A408-4LC; 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; OPTIMAKIT; SC95-1; SW2-1; TIA947-4; TIA947P-200L
Synonyms	Methyl alcohol; (Spectranalyzed; Laboratory; Certified ACS; NF; Histological; Pesticide; HPLC; OPTIMA; LC/MS; GC Resolv; Electronic; Low Water; Peroxide-Free/Sequencing)
Recommended Use	Laboratory chemicals
Company	Emergency Telephone Number
Fisher Scientific	CHEMTREC®, Inside the USA: 800-424-9300
One Reagent Lane	CHEMTREC®, Outside the USA: 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 by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. May cause irritation of respiratory tract. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

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.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions

Central nervous system disorders. Gastrointestinal tract. Preexisting eye disorders. Skin 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. Immediate medical attention is required.

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

Flash Point	12°C / 53.6°F
Method	No information available.
Autoignition Temperature	455°C / 851°F
Explosion Limits	
Upper	31.00 vol %
Lower	6.0 vol %
Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam. Use water spray to cool unopened containers.
Unsuitable Extinguishing Media	Water may be ineffective.
Hazardous Combustion Products	No information available.
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	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.

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

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

7. HANDLING AND STORAGE

Handling	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.
Storage	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 ³ (Vacated) STEL: 325 mg/m ³ (Vacated) STEL: 250 ppm Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EV
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 328 mg/m ³ STEL: 250 ppm Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 310 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 325 mg/m ³ STEL: 250 ppm Skin

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

Physical State

Liquid

Appearance

Colorless

odor

Alcohol-like

Odor Threshold

No information available.

pH

No information available.

Vapor Pressure

128 hPa @ 20 °C

Vapor Density

1.11 (Air = 1.0)

Viscosity

0.55 cP at 20 °C

Boiling Point/Range

64.7°C / 148.5°F @ 760 mmHg

Melting Point/Range

-98°C / -144.4°F

Decomposition temperature °C

No information available.

Flash Point

12°C / 53.6°F

Evaporation Rate

(Ether = 1.0)

Specific Gravity

0.791

Solubility

Miscible with water

log Pow

No data available

Molecular Weight

32.04

Molecular Formula

C H4 O

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Heat, flames and sparks.
Incompatible Materials	Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides
Hazardous Decomposition Products	Carbon monoxide (CO), Formaldehyde
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
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.

Teratogenicity Teratogenic effects have occurred in experimental animals..

Other Adverse Effects The toxicological properties have not been fully investigated.. 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 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

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

14. TRANSPORT INFORMATION

Packing Group II

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	KE-23193 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 No
 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 Depleters	Class 2 Ozone Depleters
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 does not contain any Proposition 65 chemicals.

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
 D2A Very toxic materials
 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