

SAFETY DATA SHEET

Creation Date 04-June-2009

Revision Date 19-December-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

1. Identification

Product Name Sodium methoxide, 0.5M solution in methanol

Cat No. : AC419600000; AC419600025; AC419601000; AC419605000

Synonyms Sodium methylate

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification

This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

Flammable liquids	Category 2
Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity	Category 3
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 1
Target Organs - Respiratory system, Central nervous system (CNS), Optic nerve.	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Kidney, Liver, spleen, Blood, Respiratory system.	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Toxic if swallowed, in contact with skin or if inhaled
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
May cause drowsiness and dizziness
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground and bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Use non-sparking tools
Take action to prevent static discharges

Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Call a POISON CENTER/ doctor
Rinse mouth
Explosion risk
Fight fire with normal precautions from a reasonable distance
Evacuate area
Take off contaminated clothing and wash it before reuse

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Poison, may be fatal or cause blindness if swallowed

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Methanol	67-56-1	97-98
Sodium methylate	124-41-4	2-3

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
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	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms/effects	Difficulty in breathing. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	Water may be ineffective
Flash Point	11 °C / 51.8 °F
Method -	No information available
Autoignition Temperature	455 °C / 851 °F
Explosion Limits	
Upper	36.00 vol %
Lower	7.30 vol %
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. 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 (CO₂).

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

Health
2Flammability
3Instability
0Physical hazards
N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Avoid release to the environment. See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling	Use only under a chemical fume hood. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.
Storage.	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec
Methanol	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 250 ppm STEL: 328 mg/m ³ Skin	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 250 ppm STEL: 328 mg/m ³ Skin

Component	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Methanol	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm STEL: 250 ppm Skin

Component	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Methanol	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm STEKL: 250 ppm	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 310 mg/m ³ Skin

Component	ACGIH TLV	OSHA PEL	NIOSH
Methanol 67-56-1 (97-98)	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm REL = 200 ppm (TWA) REL = 260 mg/m ³ (TWA) STEL: 250 ppm STEL: 325 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

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.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber Viton (R)	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State

Liquid

Color

Colorless

Odor

No information available

Odor Threshold

No information available

Property

Values

Remarks

Method

Melting Point/Range

-98 °C / -144.4 °F

Softening Point

No data available

Boiling Point/Range

65 °C / 149 °F

@ 760 mmHg

Flash Point

11 °C / 51.8 °F

Method - No information available

Flammability (liquid)

Highly flammable

On basis of test data

Flammability (solid,gas)

Not applicable

Liquid

Explosion Limits

Lower 5.5 vol%

Upper 44 vol%

Autoignition Temperature

455 °C / 851 °F

Decomposition Temperature

No data available

pH

No information available

Viscosity

No data available

Water Solubility

Reacts with water

Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
Methanol	-0.74	
Sodium methylate	-0.75	
Vapor Pressure	No data available	
Density / Specific Gravity	0.800	
Bulk Density	Not applicable	Liquid
Vapor Density	No data available	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	
Other Information		
Molecular Formula	C H3 Na O	
Molecular Weight	54.02	
Explosive Properties	Vapors may form explosive mixtures with air	

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
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	Toxic by inhalation. Irritating to respiratory system. INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.
Ingestion	Toxic if swallowed. Aspiration hazard. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Eyes	Irritating to eyes.
Skin	Toxic in contact with skin. Irritating to skin.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Sodium methylate	1687 mg/kg (Rat)	>2000 mg/kg (Rat)	-

Toxicologically Synergistic Products	No information available
(b) skin corrosion/irritation;	Category 2
(c) serious eye damage/irritation;	Category 2

(d) respiratory or skin sensitization;**Respiratory**

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

Component	Test method	Test species	Study result
Methanol 67-56-1 (97-98)	OECD Test Guideline 406 Guinea Pig Maximisation Test (GPMT)	guinea pig	non-sensitising

(e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

Mutagenic effects have occurred in humans

(f) carcinogenicity;

Based on available data, the classification criteria are not met

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

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Methanol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Sodium methylate	124-41-4	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity;

Based on available data, the classification criteria are not met

Component	Test method	Test species / Duration	Study result
Methanol 67-56-1 (97-98)	OECD Test Guideline 416	Rat / Inhalation 2 Generation	NOAEC = 1.3 mg/l (air)

**Reproductive Effects
Developmental Effects**

Experiments have shown reproductive toxicity effects on laboratory animals.
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.

(h) STOT-single exposure;

Category 1

Results / Target organs

Optic nerve, Central nervous system (CNS).

(i) STOT-repeated exposure;

Based on available data, the classification criteria are not met

Target Organs

None known.

(j) aspiration hazard;

Based on available data, the classification criteria are not met

Other Adverse Effects

See actual entry in RTECS for complete information The toxicological properties have not been fully investigated.

Symptoms / effects,both acute and delayed

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Other Adverse Effects

See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

This product contains the following substance(s) which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methanol	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 Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Methanol	-0.74
Sodium methylate	-0.75

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
Methanol - 67-56-1	U154	-

14. Transport information

DOT

UN-No UN1992
 Proper Shipping Name Flammable liquid, toxic, n.o.s.
 Technical Shipping Name (Contains methanol and sodium methoxide)
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group II

TDG

UN-No UN1992
 Proper Shipping Name Flammable liquid, toxic, n.o.s.
 Technical Shipping Name (Contains methanol and sodium methoxide)
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group II

IATA

UN-No UN1992
 Proper Shipping Name Flammable liquid, toxic, n.o.s.
 Technical Shipping Name (Contains methanol and sodium methoxide)
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group II

IMDG/IMO

UN-No UN1992
 Proper Shipping Name Flammable liquid, toxic, n.o.s.
 Technical Shipping Name (Contains methanol and sodium methoxide)
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group II

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Methanol	67-56-1	X	-	X	ACTIVE	200-659-6	-	-

Sodium methylate	124-41-4	X	-	X	ACTIVE	204-699-5	-	-	
Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Methanol	67-56-1	X	KE-23193	X	X	X	X	X	X
Sodium methylate	124-41-4	X	KE-23196	X	X	X	X	X	X

Legend:

X - Listed '-' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

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

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Methanol	Part 1, Group A Substance Part 5, Individual Substances Part 4 Substance		

Other International Regulations**Authorisation/Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Methanol	-	Use restricted. See entry 69. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	-
Sodium methylate	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Methanol	67-56-1	Listed	Not applicable	Not applicable	Not applicable
Sodium methylate	124-41-4	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)

		Qualifying Quantities for Major Accident Notification	Qualifying Quantities for Safety Report Requirements		
Methanol	67-56-1	500 tonne	5000 tonne	Not applicable	Not applicable
Sodium methylate	124-41-4	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com
Creation Date	04-June-2009
Revision Date	19-December-2025
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Revision Summary	This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS