

# SAFETY DATA SHEET

According to Regulation (EC) No 453/2010

SDS-MEOH-0001

Version 1.5

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[www.eamaterials.com](http://www.eamaterials.com)

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Product name : **Methanol**

Included product code : MEOH010-2.5, MEOH010-4.0, MEOH012-2.5,  
MEOH012-4.0, MEOH011-2.5P, MEOH011-4.0P,  
MEOH011-25P, MEOH011-25M, MEOH011-200M,  
MEOH008-2.5P, MEOH008-4.0P, MEOH008-25P,  
MEOH008-25M, MEOH008-200M, MEOH006-2.5P,  
MEOH008-4.0P, MEOH006-25P, MEOH006-25M,  
MEOH006-200M, MEOH113-2.5, MEOH113-4.0,  
MEOH220-5P, MEOH220-20P, MEOH220-25M,  
MEOH220-DRM

## 1.2 Relevant identified uses of the substance or mixture

Identified uses : Laboratory chemicals, Manufacture of substances

Uses advised against : Not applicable

## 1.3 Details of the supplier of the safety data sheet

Company : Elite Advanced Materials Sdn Bhd

No 1, Jalan KPK 1/2, Kawasan Perindustrian  
Kundang, 48020 Rawang, Selangor, Malaysia

E-mail address : enquiry@eamaterials.com

## 1.4 Emergency telephone number

Emergency phone : +60 3-6034 3766 (Local business hours only)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flammable liquids	Category 2
Acute toxicity, Oral	Category 3
Acute toxicity, Inhalation	Category 3
Acute toxicity, Dermal	Category 3
Specific target organ systemic toxicity - single exposure	Category 1
Specific target organ toxicity - (repeated exposure)	Category 1

## 2.2 Label elements

Labeling in compliance to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Hazard pictograms



GHS02



GHS06



GHS08

### Signal word

Danger

### Hazard statements

H225	Highly flammable liquid and vapour
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled
H370	Causes damage to organs. (Eyes)

### Precautionary statements

P210	Keep away from heat/ sparks/open flames/hot surfaces. — No smoking
P240	Ground/bond container and receiving equipment.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response

P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.

- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

### Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

### 2.3 Other hazards

Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

Synonyms : Methyl Alcohol  
 Formula : CH<sub>4</sub>O  
 Molecular Weight : 32.04 g/mol  
 CAS-No. : 67-56-1

Component	Identity	Classification Code	H-Code	Concentration (by wt)
Methanol	CAS-No.: :67-56-1	Flam. Liq. 2	H225	<=100 %
	EC-No. : 200-659-6	Acute Tox. 3 (Oral)	H301	
	Index-No. : 603-001-00-X	Acute Tox. 3 (Dermal)	H311	

		Acute Tox. 3 (Inhalation)	H331	
		STOT SE 1	H370	

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid measures

#### General information

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

#### If inhaled

Move person into fresh air and keep at rest in a position comfortable for breathing. 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.

#### In case of skin contact

Take off immediately all contaminated clothing. Wash off with soap and plenty of water for at least 15 minutes. Consult a physician.

#### In case of eye contact

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

#### If swallowed

Do NOT induce vomiting. Give nothing to drink. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and delayed symptoms and effects**

Breathing difficulties. May cause blindness: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

#### **4.3 Indication of any immediate medical attention and special treatment**

No data available.

### **SECTION 5: FIRE FIGHTING MEASURES**

#### **5.1 Extinguishing media**

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

##### Unsuitable extinguishing media

Water may be ineffective

#### **5.2 Special hazards arising from the substance or mixture**

The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Carbon monoxide may be evolved if incomplete combustion occurs.

### 5.3 Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus.

### 5.4 Further information

Use water spray to cool unopened containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Take precautionary measures against static discharges.

### 6.2 Environmental precautions

Do not discharge into drains or waterways. Prevent further leakage or spillage if safe to do so.

### 6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. (see section 13).

### 6.4 Reference to other sections

Information on waste treatment, see Section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precaution for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Wear personal protective equipment. Use only under a chemical fume hood. Keep container tightly closed and away from sources of heat, sparks and naked flames. Take precautionary measures against static discharges.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep the container tightly closed in a cool dry, well-ventilated place. Keep away from all sources of ignition, heat and direct sunlight. Avoid accumulation of electrostatic charges.

### 7.3 Specific end use

No further relevant information available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Component	ACGIH TLV	ACGIH-STEL	OSHA PEL	NIOSH IDLH
Methanol	TWA: 200 ppm	TWA: 250 ppm	(TWA) (mg/m <sup>3</sup> )	250 ppm, STEL:325 mg/m <sup>3</sup>
	Skin	Skin	TWA: 260 mg/m <sup>3</sup> (TWA) (ppm) TWA: 200 ppm	200 ppm, TWA: 260 mg/m <sup>3</sup>

### 8.2 Exposure control



### Personal protection measures, such as personal protective equipment

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled.

#### **Eye/ face protection**

Chemical goggles or safety glasses. A face shield may also be necessary. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Wear chemical resistant overall. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact\*

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact\*

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 31 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

\*Source – Sigma Aldrich, 2015

### Body protection

Complete suit protecting against

chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	colorless
Ordor	:	pungent
Ordor threshold	:	Not determined
pH - value	:	Not determined
Melting point / Range	:	-97.6 °C
Boiling point / Range	:	64.7 °C @ 760 mmHg

Flash point	:	11 °C [closed cup]
Evaporation rate	:	5.2 (ether = 1)
Flammability limit - LEL	:	6 %(V)
Flammability limit - UEL	:	36 %(V)
Vapour pressure	:	130.3 hPa at 20.0 °C 169.27 hPa at 25.0 °C
Vapor density (air = 1)	:	1.11
Density	:	0.792 g/cm <sup>3</sup> at 25.0 °C
Bulk density	:	Not determined
Solubility(ies)	:	Not determined
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	log Pow: -0.77
Auto-ignition temperature	:	455.0 °C at 1.013 hPa
Decomposition temperature	:	Not determined
Viscosity	:	0.54mPa.s at 25°C
Explosive properties	:	Not determined
Oxidising properties	:	Not determined
Surface Tension	:	0.02255 N/m @ 20°C

## 9.2 Other information

Not applicable

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

## 10.2 Chemical stability

Stable under normal conditions.

## 10.3 Possibility of hazardous reactions

No data available

## 10.4 Conditions to avoid

Accumulation of electrostatic charges, heating, heat, flames and hot surfaces

## 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides

## 10.6 Hazardous decomposition products

Carbon monoxide (CO), Formaldehyde

# SECTION 11: TOXICOLOGY INFORMATION

## 11.1 Information on toxicological effects

### Acute toxicity

LDLO Oral - Human - 143 mg/kg

Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea,

vomiting and diarrhoea.

LD50 Oral - Rat - 1.187 - 2.769 mg/kg

LC50 Inhalation - Rat - 4 h - 128.2 mg/l

LC50 Inhalation - Rat - 6 h – 87.6 mg/l

LD50 Dermal - Rabbit – 17,100 mg/kg

### **Skin corrosion/irritation**

Skin - rabbit

Remarks: Not irritating to skin.

### **Serious eye damage/eye irritation**

Eyes - rabbit

Remarks: Causes serious eye irritation.

### **Respiratory or skin sensitisation**

Maximisation Test (GPMT) - Guinea pig - OECD Test Guideline 406 - Does not cause skin sensitisation.

### **Germ cell mutagenicity**

Genotoxicity in vitro - Ames test - *S. typhimurium* - with and without metabolic activation - negative

Genotoxicity in vitro - in vitro assay - fibroblast – negative

Mutation in mammalian somatic cells.

Genotoxicity in vivo - Mouse - male and female - Intraperitoneal – negative

## **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

## **Reproductive toxicity**

Damage to fetus not classifiable

Fertility classification not possible from current data.

## **Specific target organ toxicity - single exposure**

Causes damage to optic nerve.

## **Specific target organ toxicity - repeated exposure**

Causes damage to kidney, liver, spleen, blood

## **Aspiration hazard**

No aspiration toxicity classification

## **Potential health effects**

**Inhalation** Toxic if inhaled. May cause respiratory tract irritation.

**Ingestion** Toxic if swallowed.

**Skin** Toxic if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

## **Signs and Symptoms of Exposure**

Methyl alcohol may be fatal or cause blindness if swallowed.

Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures.

Symptoms may be delayed. Damage of the:, Liver, Kidney

### Additional Information

RTECS: PC1400000

## SECTION 12: ECOLOGY INFORMATION

### 12.1 Ecotoxicity

Toxicity to fish	mortality LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 15.400,0 mg/l - 96 h  NOEC - <i>Oryzias latipes</i> - 7.900 mg/l - 200
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - > 10.000,00 mg/l - 48
Toxicity to algae	Growth inhibition EC50 - <i>Scenedesmus capricornutum</i> (fresh water algae) - 22.000,0 mg/l - 96 h

## 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 5 d Result: 72 % - rapidly biodegradable
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## 12.3 Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) - 72 d at 20 °C -5 mg/l Bioconcentration factor (BCF): 1,0
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## 12.4 Mobility in soil

Will not adsorb on soil.

## 12.5 Other adverse effects

Additional ecological information	Avoid release to the environment.
Biochemical Oxygen Demand (BOD)	600 – 1,120 mg/g
Chemical Oxygen Demand (COD)	1,420 mg/g



## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment method

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 1230	IMDG: 1230	IATA-DGR: 1230
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### 14.2 UN proper shipping name

ADR/RID:	METHANOL
IMDG:	METHANOL
IATA-DGR:	Methanol

### 14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)	IMDG: 3 (6.1)	IATA-DGR: 3 (6.1)
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#### 14.4 Packaging group

ADR/RID: II	IMDG: II	IATA-DGR: II
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#### 14.5 Environmental hazards

ADR/RID: no	IMDG Marine pollutant: no	IATA-DGR: no
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#### 14.6 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

#### 14.7 Special precautions for user

No data available

### SECTION 15: REGULATORY INFORMATION

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

No data available

### SECTION 16: OTHER INFORMATION

This information is based on present level of our knowledge, however, this shall not constitute a guarantee product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H225 Highly flammable liquid and vapor

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

R11 Highly flammable

R36 Irritating to eyes

R67 Vapours may cause drowsiness and dizziness

**Abbreviations:**

ADR : European agreement concerning the international carriage of dangerous goods by road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association

ICAO : International Civil Aviation Organization

RID : Regulations concerning the International Carriage of Dangerous goods by rail.

## Notice to reader

*The information contained in this Safety Data Sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the products and should not be construed as any guarantee of technical performance or suitability for particular application.*

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