

# METHANOL

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
 Revision date: 08/13/2014 Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
 Trade name : METHANOL  
 CAS No : 67-56-1  
 Product code : AB01350  
 Formula : CH4O

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory use/Manufacturing component/Research  
 Use of the substance/mixture : Solvent

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

AmericanBio, Inc.  
 15 Erie Dr.  
 Natick, MA 01760 - USA  
 T 800.443.0600 - F 508.655.2754  
[info@americanbio.com](mailto:info@americanbio.com) - [www.americanbio.com](http://www.americanbio.com)

#### 1.4. Emergency telephone number

Emergency number : 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Flam. Liq. 2 H225  
 Acute Tox. 3 (Oral) H301  
 Acute Tox. 3 (Dermal) H311  
 Acute Tox. 3 (Inhalation:dust,mist) H331  
 STOT SE 1 H370

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor  
 H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
 H370 - Causes damage to organs

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
 P233 - Keep container tightly closed  
 P240 - Ground/bond container and receiving equipment  
 P241 - Use explosion-proof electrical, lighting, ventilating equipment  
 P242 - Use only non-sparking tools  
 P243 - Take precautionary measures against static discharge  
 P260 - Do not breathe fume, mist, vapors, spray  
 P261 - Avoid breathing fume, gas, mist, spray, vapors  
 P264 - Wash hands, forearms and face thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear eye protection, face shield, protective clothing, protective gloves  
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable

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for breathing  
P311 - Call a POISON CENTER or doctor/physician  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see SECTION 4 on this label)  
P330 - If swallowed, rinse mouth  
P361 - Remove/Take off immediately all contaminated clothing  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use sand/foam/water spray for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Collect all waste in suitable and labeled containers and dispose according to local legislation

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
METHANOL (Main constituent)	(CAS No) 67-56-1	100	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 STOT SE 1, H370

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Never give alcohol to drink. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a POISON CENTER or doctor/physician. Specific treatment (see If you feel unwell, seek medical advice on this label).
- First-aid measures after inhalation : Remove the victim into fresh air. Immediately consult a doctor/medical service. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see If you feel unwell, seek medical advice. on this label).
- First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Consult a doctor/medical service. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Specific measures (see Take victim to a doctor if irritation persists on this label). Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Rinse with water. Take victim to an ophthalmologist if irritation persists. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth with water. Give nothing to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Doctor: administration of chemical antidote. Doctor: gastric lavage. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see Consult a doctor/medical service if you feel unwell on this label).

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes damage to organs.

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Symptoms/injuries after inhalation	: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion. Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/injuries after skin contact	: Symptoms similar to those listed under ingestion. Slight irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/injuries after eye contact	: Redness of the eye tissue. Lacrimation.
Symptoms/injuries after ingestion	: Nausea. Vomiting. AFTER ABSORPTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions. Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

### 4.3. Indication of any immediate medical attention and special treatment needed

Hospitalize at once. Until victim can be cared for by specialized staff:

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media	: Preferably: alcohol resistant foam. Water spray. BC powder. Carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Solid water jet ineffective as extinguishing medium. Do not use a heavy water stream.

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

Fire hazard	: DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Highly flammable liquid and vapor.
Explosion hazard	: DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard". May form flammable/explosive vapor-air mixture.
Reactivity	: On heating: release of toxic/corrosive/combustible gases/vapours (formaldehyde). Upon combustion: CO and CO <sub>2</sub> are formed. Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.

### 5.3. Advice for firefighters

Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Gas-tight suit.
Emergency procedures	: Keep upwind. Mark the danger area. Consider evacuation. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes. Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
Emergency procedures	: Ventilate area.

### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/vapours with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
- Methods for cleaning up : Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite slaked lime or soda ash. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not breathe dust/fume/gas/mist/vapors/spray.
- Hygiene measures : Do not eat, drink or smoke when using this product.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof Proper grounding procedures to avoid static electricity should be followed. equipment.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep in fireproof place. Keep container tightly closed.
- Incompatible products : Strong bases. strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. (strong) bases. halogens. amines. water/moisture.
- Storage area : Store at room temperature. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Provide the tank with earthing. Unauthorized persons are not admitted. Aboveground. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: steel. stainless steel. iron. glass. MATERIAL TO AVOID: lead. aluminium. zinc. polyethylene. PVC.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

METHANOL (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm

### 8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.

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Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: polyethylene/ethylenevinylalcohol. styrene-butadiene rubber. viton. GIVE LESS RESISTANCE: chloroprene rubber. chlorinated polyethylene. natural rubber. nitrile rubber/PVC. GIVE POOR RESISTANCE: leather. neoprene. nitrile rubber. polyethylene. PVA. PVC. polyurethane.
Hand protection	: Gloves. Wear protective gloves.
Eye protection	: Combined eye and respiratory protection. Safety glasses. Chemical goggles or safety glasses.
Skin and body protection	: Head/neck protection. Protective clothing.
Respiratory protection	: Gas mask with filter type AX at conc. in air > exposure limit. Wear gas mask with filter type A if conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Other information	: When using, do not eat, drink or smoke.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 32.04 g/mol
Color	: Colourless.
Odor	: Characteristic odour. Mild odour. Pleasant odour. Alcohol odour. Commercial/unpurified substance: Irritating/pungent odour.
Odor threshold	: 2000 - 8800 ppm 2620 - 11528 mg/m <sup>3</sup>
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: 4.1
Relative evaporation rate (ether=1)	: 6.3
Melting point	: -98 °C
Freezing point	: No data available
Boiling point	: 65 °C
Flash point	: 11 °C
Critical temperature	: 240 °C
Self ignition temperature	: 455 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 128 hPa
Vapor pressure at 50 °C	: 552 hPa
Critical pressure	: 79547 hPa
Relative vapor density at 20 °C	: 1.1
Relative density	: 0.79
Relative density of saturated gas/air mixture	: 1.0
Density	: 792 kg/m <sup>3</sup>
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Water: Complete Ethanol: Complete Ether: Complete Acetone: Complete
Log Pow	: -0.77 (Experimental value; Other,Experimental value; Other)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.6 mPa.s (20 °C)
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 5.5 - 36.5 vol %

#### 9.2. Other information

Minimum ignition energy	: 0.14 mJ
Saturation concentration	: 166 g/m <sup>3</sup>

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VOC content : 100 %  
Other properties : Clear. Hygroscopic. Volatile. Substance has neutral reaction.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

On heating: release of toxic/corrosive/combustible gases/vapours (formaldehyde). Upon combustion: CO and CO<sub>2</sub> are formed. Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.

#### 10.2. Chemical stability

Hygroscopic. Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

METHANOL ( f )67-56-1	
LD50 oral rat	> 5000 mg/kg (1187-2769 mg/kg bodyweight; Rat; Rat)
LD50 dermal rabbit	15800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat)

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : Causes damage to organs.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

Symptoms/injuries after inhalation : Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion. Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/injuries after skin contact : Symptoms similar to those listed under ingestion. Slight irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.

Symptoms/injuries after eye contact : Redness of the eye tissue. Lacrimation.

Symptoms/injuries after ingestion : Nausea. Vomiting. AFTER ABSORPTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions. Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.  
Ecology - air : TA-Luft Klasse 5.2.5/l.  
Ecology - water : Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). Slightly harmful to bacteria (EC50: 100 - 1000 mg/l). Inhibition of activated sludge.

METHANOL (67-56-1)	
LC50 fish 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna)
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)

#### 12.2. Persistence and degradability

METHANOL (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not established.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 % ThOD

#### 12.3. Bioaccumulative potential

METHANOL (67-56-1)	
BCF fish 1	< 10 (Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other, Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

#### 12.4. Mobility in soil

METHANOL (67-56-1)	
Surface tension	0.023 N/m (20 °C)

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Incinerate under surveillance with energy recovery. Do not discharge into drains or the environment. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Use appropriate containment to avoid environmental contamination.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC. Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

### SECTION 14: Transport information

In accordance with DOT  
Transport document description : UN1230 Methanol, 3, II



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UN-No.(DOT) : 1230  
DOT NA no. : UN1230  
DOT Proper Shipping Name : Methanol  
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard labels (DOT) : 3 - Flammable liquid



DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada  
Packing group (DOT) : II - Medium Danger  
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

### Additional information

Other information : No supplementary information available.  
State during transport (ADR-RID) : as liquid.

### ADR

Transport document description : UN 1230, 3 (6.1), II, (D/E)  
Packing group (ADR) : II  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 336  
Classification code (ADR) : FT1  
Danger labels (ADR) : 3 - Flammable liquids  
6.1 - Toxic substances



Orange plates : An orange rectangular plate with a black border. The top half contains the number '336' and the bottom half contains the number '1230' in black text.



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Tunnel restriction code : D/E

### Transport by sea

UN-No. (IMDG) : 1230  
Class (IMDG) : 3 - Flammable liquids  
Subsidiary risks (IMDG) : 6.1  
EmS-No. (1) : F-E  
MFAG-No : 19  
EmS-No. (2) : S-D

### Air transport

UN-No.(IATA) : 1230  
Class (IATA) : 3 - Flammable Liquids  
Packing group (IATA) : II - Medium Danger  
Subsidiary risks (IATA) : 6.1

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### METHANOL (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
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### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

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

Flam. Liq. 2 : H225  
Acute Tox. 3 (Inhalation) : H331  
Acute Tox. 3 (Dermal) : H311  
Acute Tox. 3 (Oral) : H301  
STOT SE 1 : H370  
STOT SE 1 : H370  
STOT SE 1 : H370

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11  
T; R23/24/25  
T; R39/23/24/25

Full text of R-phrases: see section 16

#### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

#### METHANOL(67-56-1)

U.S. - California - Proposition 65 - Developmental Toxicity	Yes
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State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List
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# METHANOL

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**METHANOL(67-56-1)**

U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Other information : None.

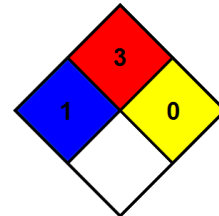
Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Flam. Liq. 2	Flammable liquids Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

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