

# SAFETY DATA SHEET

## 1. Identification

**Product identifier**                      **Methanol**

**Other means of identification**

**CAS number**                              67-56-1

**Recommended use**                      General purpose solvent.

**Recommended restrictions**              Use in accordance with manufacturer's recommendations.

### Manufacturer/Importer/Supplier/Distributor information

**Company name**                      Greenfield Global USA Inc.

**Address**                                      1101 Isaac Shelby Drive  
Shelbyville, KY 40065  
USA

**Telephone**                              502.232.7600

**Fax**    502.633.6100

**Company name**                      Greenfield Global USA Inc.

**Address**                                      58 Vale Road  
Brookfield, CT 06804  
USA

**Telephone**                              203.740.3471

**Fax**    203.740.3481

**Company name**                      Greenfield Global Inc.

**Address**                                      2 Chelsea Lane  
Brampton, Ontario, L6T 3Y4

**Emergency phone number**

**USA**    CHEMTREC: 1.800.424.9300 (CCN 17213)

**International**                          CHEMTREC: +1.703.527.3887 (CCN 17213)

## 2. Hazard identification

**Physical hazards**                      Flammable liquids                              Category 2

**Health hazards**                              Acute toxicity, oral                              Category 3

    Acute toxicity, dermal                              Category 3

    Acute toxicity, inhalation                              Category 3

    Specific target organ toxicity following single exposure (inhalation)                              Category 1 (Central nervous system, Optic nerve)

**Environmental hazards**                      Not classified.

### Label elements



**Signal word**                              Danger

**Hazard statement**                      Highly flammable liquid and vapour. Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes damage to organs (Central nervous system, Optic nerve) by inhalation.

## 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. Use non-sparking tools. Take action to prevent static discharges. Do not breathe mist or vapour. Wash 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.

### Response

IF SWALLOWED: Immediately call a POISON CENTRE/doctor. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.

### Storage

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

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other hazards

None known.

### Supplemental information

None.

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Methanol		67-56-1	100

### Composition comments

All concentrations are in percent by weight unless otherwise indicated.

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.

### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

### Most important symptoms/effects, acute and delayed

Narcosis. Headache. Dizziness. Nausea, vomiting. Behavioural changes. Decrease in motor functions. Direct contact with eyes may cause temporary irritation. Methanol: Human exposure to methanol may result in illness, systemic poisoning, blindness, optic nerve damage and perhaps death, after being ingested, absorbed through the skin or inhaled. Death due to cardiac or respiratory failure has been reported in some cases from consumption of as little as 30 mls.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Provide standard methanol ingestion treatment. To prepare the antidote, make a solution using 100 mL of 100-proof ethyl alcohol (grain alcohol) in 2000 mL of water and give 1.5 mL/kg of body weight, or 100 mL for an average adult. Following this, at 2 hour intervals for 4 days, give the antidote (0.5-1.0 mL/kg of body weight, orally or intravenously) to reduce the metabolism of the methanol and to allow time for its excretion. Blood ethanol levels should be 1.0-1.5 mg/mL.

### General information

Take off immediately all contaminated clothing. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

<b>Specific hazards arising from the chemical</b>	Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapour.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	328 mg/m3
		250 ppm
	TWA	262 mg/m3
		200 ppm

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

**Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)**

Material	Type	Value
Methanol (CAS 67-56-1)	STEL	328 mg/m3
		250 ppm
	TWA	262 mg/m3
		200 ppm

**Biological limit values**

**ACGIH Biological Exposure Indices**

Material	Value	Determinant	Specimen	Sampling Time
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**Canada - Alberta OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Canada - British Columbia OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Canada - Manitoba OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Canada - Ontario OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Canada - Quebec OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Canada - Saskatchewan OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Nitrile, butyl rubber or neoprene gloves are recommended. Other suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapour cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Clear. Colorless.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-98 °C (-144.4 °F)
<b>Initial boiling point and boiling range</b>	64 °C (147.2 °F) 101.325 kPa
<b>Flash point</b>	11.0 °C (51.8 °F) Closed cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	6 %
<b>Flammability limit - upper (%)</b>	36 %
<b>Vapour pressure</b>	130.3 hPa (20 °C (68 °F))
<b>Vapour density</b>	1.1
<b>Relative density</b>	0.791 g/ml (25 °C (77 °F))
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Completely miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	464 °C (867.2 °F)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	C-H4-O
<b>Molecular weight</b>	32.04 g/mol
<b>Oxidising properties</b>	Not oxidising.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidising agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Toxic if inhaled. Causes damage to organs by inhalation.
Skin contact	Toxic in contact with skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Toxic if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

Narcosis. Headache. Dizziness. Nausea, vomiting. Behavioural changes. Decrease in motor functions. Direct contact with eyes may cause temporary irritation. Methanol: Human exposure to methanol may result in illness, systemic poisoning, blindness, optic nerve damage and perhaps death, after being ingested, absorbed through the skin or inhaled. Death due to cardiac or respiratory failure has been reported in some cases from consumption of as little as 30 mls.

### Information on toxicological effects

Acute toxicity	Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Causes damage to organs (Central nervous system, Optic nerve) by inhalation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

## 12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	The product is readily biodegradable.
Bioaccumulative potential	The product is not expected to bioaccumulate.
Mobility in soil	No data available.
Mobility in general	This product is miscible in water.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

## 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### TDG

UN number	UN1230
-----------	--------

<b>UN proper shipping name</b>	Methanol
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IATA

<b>UN number</b>	UN1230
<b>UN proper shipping name</b>	Methanol
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1
<b>Label(s)</b>	3 +6.1
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>ERG Code</b>	3P
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

<b>UN number</b>	UN1230
<b>UN proper shipping name</b>	Methanol
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1
<b>Label(s)</b>	3 +6.1
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>EmS</b>	F-E, S-D
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

#### Controlled Drugs and Substances Act

Not regulated.

#### Export Control List (CEPA 1999, Schedule 3)

Not listed.

#### Greenhouse Gases

Not listed.

#### Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Methanol (CAS 67-56-1)

#### Precursor Control Regulations

Not regulated.

#### International regulations

##### Stockholm Convention

Not applicable.

##### Rotterdam Convention

Not applicable.

##### Kyoto Protocol

Not applicable.

##### Montreal Protocol

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

**Issue date** 11-June-2018

**Revision date** -

**Version No.** 01

**Disclaimer** This product is subject to Greenfield Global Inc.'s terms and conditions, which can be found at <http://www.greenfield.com/tc-po-can/>. Greenfield cannot anticipate all conditions under which this information and this product, or the products of other manufacturers in combination with this product, may be used. The user is responsible for the proper and safe use, handling, storage and disposal of the product, and assumes liability for any loss, injury, damage or expense arising from any failure to do so. The data in this sheet is based on information and experience available at the time of writing.