

Section 1- Chemical Product and Company Identification

Product Name: Methanol

Supplier: Camco Manufacturing, Inc.
121 Landmark Drive
Greensboro, NC 27409
1-800-334-2004

Product Use: Cleaner / Solvent

Product Code: 32908 (55 Gallon Drum)

Date of Preparation/Revision: October 9, 2014

In case of Emergency: 1-800-535-5053

Section 2- Hazards identification

Physical State: Liquid. [CLEAR, COLORLESS, FLAMMABLE, POISONOUS LIQUID WITH CHARACTERISTIC PUNGENT ODOR]



Danger



Poison



Toxic

DANGER

GHS Classifications

Flammable Liquid (Category 2)
Acute Inhalation Toxicity (Category 3)
Acute Dermal Toxicity (Category 3)
Acute Oral Toxicity (Category 3)
Specific Target Organ Systemic Toxicity (STOT)-Single Exposure (Category 1)

Hazard Statements

H225 Highly flammable liquid and vapor
H301 Toxic if swallowed
H331 Toxic if inhaled
H311 Toxic in contact with skin
H370 Cause damage to organs

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P233 Keep container tightly closed
P240 Ground/Bond container and receiving equipment
P260 Do not breathe dust/fumes/gas/mist/vapors/spray
P264 Wash thoroughly after handling

Response statements

P301 + P313 IF SWALLOWED: Immediately call a Poison Center or Doctor/Physician
P331 Do Not induce vomiting

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see First Aid Measures on Safety Data Sheet)

Disposal

P501 Dispose of contents/container in accordance with local/regional/national regulations

HIGHLY FLAMMABLE LIQUID AND VAPOR.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Highly Flammable liquid. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Avoid contact with skin and clothing. May cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.

Target organs: May cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

Potential acute health effects

Eyes: May cause eye irritation.
Skin: May cause skin irritation.
Inhalation: Significant effects or critical hazards.
Ingestion: Significant effects or critical hazards.

Potential Chronic

Health Effects: CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

HMIS Ratings: Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * =Chronic hazard

Medical conditions aggravated by overexposure:

Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

Section 3 - Composition, Information on Ingredients

<u>Name</u>	<u>CAS Number</u>	<u>% Volume</u>	<u>Exposure limits</u>
Methanol	67-56-1	100	ACGIH TLV (United States, 1/2009). Absorbed through skin. STEL: 328 mg/m ³ 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 262 mg/m ³ 8 hour(s). TWA: 200 ppm 8 hour(s). NIOSH REL (United States, 6/2009) Absorbed through skin. STEL: 325 mg/m ³ 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 260 mg/m ³ 10 hour(s). TWA: 200 ppm 10 hour(s). OSHA PEL (United States, 11/2006). TWA: 260 mg/m ³ 8 hour(s).

TWA: 200 ppm 8 hour(s).
**OSHA PEL 1989 (United States, 3/1989).
Absorbed through skin.**
STEL: 325 mg/m³ 15 minute(s).
STEL: 250 ppm 15 minute(s).
TWA: 260 mg/m³ 8 hour(s).
TWA: 200 ppm 8 hour(s).

Section 4 - First Aid Measures

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5 - Fire-Fighting Measures

Flammability of the Product: Flammable
Auto-ignition Temperature: 464°C (867.2°F)
Flash Point: Closed cup: 54° F (12.2° C)
Flammable Limits: Lower: 6% Upper: 36%
Products of Combustion: Decomposition products may include the following materials:
Carbon Dioxide and Carbon Monoxide

Extinguishing Media

Suitable: Use dry chemical, CO₂, water spray (fog) or foam.
Not suitable: Do not use water jet.
Special Exposure Hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Equipment for Fire-Fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

HMIS Ratings: Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Section 6 - Accidental release measures

- Personal Precautions:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental Precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for Cleaning Up:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7- Handling and Storage

- Handling:** Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage:** Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in

unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8 - Exposure Controls / Personal Protection

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering controls:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Eyes:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory:

Use only with adequate ventilation.

Hands:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protection in case of a large spill:

Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name:

Methanol

ACGIH TLV (United States, 1/2009). Absorbed through skin.

STEL: 328 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 262 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

NIOSH REL (United States, 6/2009). Absorbed through skin.

STEL: 325 mg/m³ 15 minute(s).

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OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.

STEL: 325 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 260 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

Consult local authorities for acceptable exposure limits.

Section 9 - Physical and Chemical Properties

Physical State:	Clear Liquid
Odor:	Strong Alcohol Odor
Boiling/condensation point:	64-68° F
Melting/freezing point:	NA
Critical temperature:	NA
Vapor density:	1.11 (Air = 1.0)
Specific Gravity:	0.7920 @ 68° F
Flash Point (PMCC):	54° F (12.2° C)
Auto-ignition Temperature:	464°C (867.2°F)
Flammable Limits in Air by Volume:	LOWER: ~ 6.0 vol % UPPER: ~ 36.0 vol %
Evaporation Rate:	Greater than n-Butyl Acetate
Decomposition Temperature:	Not Determined
Viscosity (cps):	< 20cps
VOC (%):	≈ 100%

Section 10 - Stability and Reactivity

Stability and Reactivity:	The product is stable.
Incompatibility with various Substances:	Extremely reactive or incompatible with the following materials: oxidizing materials.
Hazardous Decomposition Products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11 - Toxicological Information

Toxicity Data

Product/Ingredient Name	Result	Species	Dose	Exposure
Methanol	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Intraperitoneal	Rat	7529 mg/kg	-
	LD50 Intravenous	Rat	2131 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	TDLo Oral	Rat	8 g/kg	-
	TDLo Intraperitoneal	Rat	3490 mg/kg	-
	TDLo Oral	Rat	3500 mg/kg	-
	TDLo Intraperitoneal	Rat	3000 mg/kg	-
	TDLo Oral	Rat	3 g/kg	-
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours

IDLH: 6000 ppm

Chronic effects on humans May cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

Other toxic effects on humans No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic Effects: No known significant effects or critical hazards.

Mutagenic Effects: No known significant effects or critical hazards.

Reproduction Toxicity: No known significant effects or critical hazards.

Section 12 - Ecological Information

Aquatic Ecotoxicity:

Methanol	Acute EC50 2220 to 23400 mg/L Fresh Water	Daphnia – Water Flea – Daphnia obtuse - Neonate - <24 hours	48 hours
	Acute EC50 13000000 13400000 ug/L Fresh Water	Fish – Rainbow trout, Donaldson trout – Oncorhynchus mykiss Juvenile (Fledgling, Hatchling, Weanling) 0.813 g	96 hours
	Acute EC50 12700000 13700000 ug/l Fresh Water	Fish – Bluegill– Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) 3.07 g	96 hours
	Acute EC50 >10000000 ug/L Fresh Water	Daphnia – Water Flea – Daphnia magna - 6 to 24 hours	48 hours
	Acute EC50 24500000 to 29350000 23400 ug/L Fresh Water	Daphnia – Water Flea – Daphnia magna - Larve - <24 hours	48 hours
	Acute EC50 15500 mg/L Fresh Water	Fish – Bluegill– Lepomis macrochirus	96 hours
	Acute EC50 3289 to 4395 mg/L Fresh Water	Daphnia – Water Flea – Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 10000000 to 33000000 ug/L Marine Water	Fish – Hooknose – Agonus cataphractus - Adult	96 hours
	Acute EC50 19 to 20 ml/L Fresh Water	Fish – Rainbow trout, Donaldson trout – Oncorhynchus mykiss 0.8 g	96 hours

Acute LC50 250000 ug/L Marine Water	Crustaceans – Common shrimp – sand shrimp – Crangon crangon – Adult	48 hours
Acute EC50 >100000 ug/l Fresh Water	Fish – Fathead minnow Pimephales promelas Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
Acute EC50 28000000 ug/l Marine Water	Fish – Bleak – Alburnus alburnus – 8 cm	96 hours
Acute EC50 >28000000 ug/l Marine Water	Fish – Bleak – Alburnus alburnus – 8 to 10 cm	96 hours
Acute EC50 15400000 to 17600000 ug/l Fresh Water	Fish – Bluegill – Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) 3.07 g	96 hours
Acute EC50 20100000 to 20700000 ug/L Fresh Water	Fish – Rainbow trout, Donaldson trout – Oncorhynchus mykiss Juvenile (Fledgling, Hatchling, Weanling) 0.813 g	96 hours

Products of degradation: Products of degradation: carbon oxides (CO, CO₂) and water.

Section 13 - Disposal Considerations

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14 - Transport information

Domestic Ground within the Continental US under 49CFR100-185

Regulatory Information	UN Number	Proper Shipping Name	Class	Packing Group
DOT Classification	UN1230	Methanol	3	II

IMDG
 UN1230

Refer to Current IMDG regulations for full shipping description requirements

IATA

This material is not prepared or packaged for air transportation

International shipping requirements must be determined by the party offering the material for transportation

Section 15 - Regulatory Information

U.S. Federal regulations

- United States inventory (TSCA 8b):** This material is listed or exempted.
- SARA 302/304/311/312 extremely hazardous substances:** No products were found.
- SARA 302/304 emergency planning and notification:** No products were found.
- SARA 302/304/311/312 hazardous chemicals:** Methanol
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**
 Methanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
- Clean Water Act (CWA) 307:** No products were found.
- Clean Water Act (CWA) 311:** No products were found.
- Clean Air Act (CAA) 112 accidental release prevention:** No products were found.
- Clean Air Act (CAA) 112 regulated flammable substances:** No products were found.
- Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

SARA 313	Product Name	CAS Number	Concentration
Form R – Reporting Requirements:	Listed and Methanol	67-56-1	

State regulations

- Connecticut Carcinogen Reporting:** This material is not listed.
- Connecticut Hazardous Material Survey:** This material is not listed.
- Florida substances:** This material is not listed.
- Illinois Chemical Safety Act:** This material is not listed.
- Illinois Toxic Substances Disclosure to Employee Act:** This material is not listed.
- Louisiana Reporting:** This material is not listed.
- Louisiana Spill:** This material is not listed.
- Massachusetts Spill:** This material is not listed.
- Massachusetts Substances:** This material is listed.
- Michigan Critical Material:** This material is not listed.
- Minnesota Hazardous Substances:** This material is not listed.
- New Jersey Hazardous Substances:** This material is listed.
- New Jersey Spill:** This material is not listed.
- New Jersey Toxic Catastrophe Prevention Act:** This material is not listed.
- New York Acutely Hazardous Substances:** This material is not listed.
- New York Toxic Chemical Release Reporting:** This material is not listed.
- Pennsylvania RTK Hazardous Substances:** This material is listed.
- Rhode Island Hazardous Substances:** This material is not listed
- California Prop 65 Warning:** Listed and Products of Combustion

Section 16 - Other information

NFPA CODES: Health	1
Flammability	3
Reactivity	0

Note - NFPA ratings are based on a 0-4 rating scale with 0 representing minimal hazards or risks and 4 representing extreme hazards or risks.

SAFETY DATA SHEET

Methanol

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Date of Preparation/Revision: October 9, 2014 (Supersedes all previous MSDS and SDS)

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Camco Manufacturing, Inc., to be accurate. However, the information is provided without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the responsibility of the user to determine the safety, toxicity and suitability of their own use, handling and disposal of this product.