

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: METHYL ALCOHOL,

PRODUCT NUMBER(S): 193500, 193510, 193520, 193530, 193540, 193550, 193560, 193570, 193700, 193900

TRADE NAMES/SYNONYMS: Methanol; Wood alcohol; Methyl hydroxide; Carbinol; Monohydroxymethane; Wood spirit; Wood naphtha; Methylol;

CAS-NO: 67-56-1

CHEMICAL FAMILY: Hydroxyl, aliphatic

1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Industrial Use: Distribution of substance. Formulation and (re)packaging of substances and mixtures Water treatment chemicals, wastewater. Professional use: Use as a fuel. Use in cleaning agents. Use as a laboratory reagent. Use in oil and gas field drilling and production operations. Consumer Use: Use in cleaning agents.

USES ADVISED AGAINST: None Identified

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: G.J. CHEMICAL CO., INC.

Address: 40 VERONICA AVENUE
SOMERSET, NJ 08873

Telephone: 1-973-589-1450

Fax: 1-973-589-3072

1.4 Emergency Telephone Number

Emergency Phone: 1-800-424-9300 (Chemtrec)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - single exposure (Category 1), H370

2.2 GHS Label elements, including precautionary statements



Pictograms:

GHS02

GHS06

GHS08

Signal word

DANGER

Hazard statement(s)

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 statement(s)

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin 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 protective gloves/ eye protection/ face protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. INGREDIENTS

3.1 SUBSTANCE

COMPONENT	CAS NO.	% BY WT.	CLASSIFICATION
Methanol EC-No.200-659-6 Index-No.603-001-00-X Reg.-No. 01-2119433307-44-XXXX	67-56-1	99.8% min.	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 STOT-SE (Category 1), H370
Water	7732-18-5	0.03% max.	Not a hazardous substance or mixture.
Other Carbonyl Compounds each, Acetone, Acetaldehyde and Formaldehyde		0.001% max.	
OTHER CONTAMINANTS: Residue:		0.001% max.	

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

INHALATION: METHYL ALCOHOL (METHANOL): NARCOTIC/NEUROTOXIN.

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

SKIN CONTACT: METHYL ALCOHOL (METHANOL):
IRRITANT/NARCOTIC/NEUROTOXIN.

****FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: METHYL ALCOHOL (METHANOL): IRRITANT.

****FIRST AID- Wash eyes immediately with large amounts of water or**

normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Get medical attention immediately

INGESTION: METHYL ALCOHOL (METHANOL): NARCOTIC/NEUROTOXIN.

****FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED INGESTION:

Inhalation: Irritation of the mucous membranes, difficulty breathing, sharp pains,

Skin: Contact with liquid may cause irritation. Absorption through skin causes metabolic acidosis and affects eyes and central nervous system as with ingestion.

Eyes: Vapors may cause irritation. High concentrations have been reported to cause violent inflammation of the conjunctiva and epithelial defects on the cornea.

Ingestion: Can cause inebriation, drowsiness, difficulty breathing, severe pain, vomiting, convulsions, unconsciousness, and coma. Effects on the eye from ingestion, include blurred or dimmed vision, dilated perception, photophobia, and optic nerve atrophy. Partial and full blindness can occur. Liver, kidney, heart, stomach, intestinal and pancreatic damage can occur. Death may be due to respiratory failure or circulatory collapse. As little as 15 ml has caused blindness. The usual fatal dose is 16-240 ml. A latent period of several hours may occur between exposure and the onset of symptoms.

Delay Causes damage to organs through prolonged or repeated exposure.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED.

****ANTIDOTE**:** The following antidote(s) have been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel.

METHANOL POISONING:

Give ethanol, 50% (100 proof), 1.5 ml/kg orally initially, diluted to no more than 5% solution, followed by 0.5-1.0 ml/kg every 2 hours orally or intravenously for 4 days in order to reduce metabolism of methanol and to allow time for its excretion. Blood ethanol level should be in the range of 1-1.5 mg/ml (Dreisbach, Handbook of Poisoning, 12th ed.). Antidote should be administered by qualified medical personnel.

Oral or intravenous administration of 4-methylpyrazole inhibits alcohol dehydrogenase and has been used effectively as an antidote for methanol or ethylene glycol poisoning (Ellenhorn and Barceloux, Medical Toxicology).

5. FIRE FIGHTING MEASURES

FLASH POINT: 11°C (51.8°F) (CC)

BURNING RATE 1.7 mm/min

AUTOIGNITION TEMP.: 385°C (725°F)

UNIFORM FIRE CODE: Flammable Liquid Class IB

LOWER EXPLOSIVE LIMIT: 5.5%

UPPER EXPLOSIVE LIMIT: 36.5%

5.1 EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR ALCOHOL-RESISTANT FOAM. FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL-RESISTANT FOAM.

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD AND MODERATE EXPLOSION HAZARD WHEN EXPOSED TO HEAT, FLAME, OR OXIDIZERS.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK VAPOR-AIR MIXTURES ARE EXPLOSIVE. CONTAINERS MAY EXPLODE IN FIRE, METHANOL BURNS WITH A BARELY VISIBLE BLUE FLAME.

Containers may explode in fire, methanol burns with a non-luminous blue flame.

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides, nitrogen oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS:

Highly Flammable liquid and vapor. Mixtures >20% methanol with water:

Flammable Shut off source. Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing toxic vapors, stay upwind. Extinguish only if flow can be stopped; Do not spray pool fires directly. A solid stream of water or foam directed into hot burning liquid can cause frothing. Move container from fire area if you can do it without risk. Cool containers with flooding quantities of water, apply from as far a distance as possible. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Dike fire-control water for later disposal; do not scatter the material. Apply cooling water to sides of

containers that are exposed to flames until well after fire is out. Stay away from ends of tanks. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) for confined spaces. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations. For large spills evacuate downwind areas as conditions warrant to prevent exposure and to allow vapors or fumes to dissipate.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Soluble in water. When released this product is expected to evaporate. Contact authorities in the event of pollution of soil and the aquatic environment.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for Containment:

Use explosion proof equipment. Shut off valves, shut off ignition sources. Avoid friction, static electricity and sparks. Do not touch spilled material. Stop leak if you can do it without risk. Contain spill, for small spills take up with sand or other non-flammable absorbent in spill area. For large spills dike far ahead of spill use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent. No smoking, flames or flares in hazard area! Keep unnecessary people away; isolate hazard area and deny entry

Methods for Cleanup:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

Soil spill: Dig holding area such as lagoon, pond or pit for containment. Dike flow of spilled material using soil or sandbags or foamed barriers such as polyurethane or concrete.

Air Spill: Apply water spray to knock down vapors.

Water Spill: Allow spilled material to aerate. Limit spill motion and dispersion with natural barriers or oil spill control booms. Use suction hoses to remove trapped spill material.

REPORTABLE QUANTITY (RQ): 5000 POUNDS

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8802 or (202) 426-2675 in the metropolitan Washington D.C. area (40 CFR 302.6).

6.4 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: Methanol is a class IB flammable liquid (NFPA). This material presents a fire hazard. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers. : Keep away from heat, sparks and flame. Keep container tightly closed and upright to prevent leakage. Avoid breathing vapor or spray mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. In case of spillage absorb and flush with large volumes of water immediately. Do not take internally. **VAPORS MAY BE EXPLOSIVE. MATERIAL IS POISONOUS; AVOID INHALATION OF VAPORS OR CONTACT WITH SKIN. DO NOT ALLOW MATERIAL TO CONTAMINATE WATER SOURCES.**

STATIC HAZARD> Follow the maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Substances with low electro-conductivity, which may be ignited by electrostatic sparks should be stored in containers which meet the bonding and grounding guidelines specified in NFPA 77-1983, recommended practice on static electricity.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:
CONTAINER WARNINGS: Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing

materials. Keep containers closed when not in use.

Incompatible materials: Lead, Aluminum, Zinc, oxidizing agents, strong acids, strong bases, polyethylene, PVC (Polyvinyl chloride), nitrile.

Observe all federal, state and local regulations when storing or disposing of this substance. For assistance, contact the district director of the Environmental Protection Agency. Store in accordance with 29 CFR 1910.106.

Store away from incompatible substances.

CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS

COMPONENT	CAS NO.	% BY WT.	EXPOSURE LIMITS
Methanol	67-56-1	99.8% min	200PPM TLV (ACGIH)
	EC-No.200-659-6		250PPM STEL (ACGIH)
	Index-No.603-001-00-X		200PPM TWA (OSHA)
	Reg.-No. 01-2119433307-44-XXXX		250PPM STEL (OSHA)
			200PPM TWA (NIOSH)
			250PPM STEL (NIOSH)
			25000ppm IDLH

Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES> Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS> Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits.

All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION: The following respirators and maximum use concentrations are recommendations by the U.S. Department of Health and Human Services, NIOSH Pocket Guide to Chemical Hazards; NIOSH criteria documents or by the U.S. Department of Labor, 29 CFR 1910 Subpart Z.

The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

METHYL ALCOHOL (METHANOL):

2000 PPM- Any supplied-air respirator.

Any self-contained breathing apparatus.

5000 PPM- Any supplied-air respirator operated in a continuous-flow mode.

10,000 PPM- Any self-contained breathing apparatus with a full face-piece.

Any supplied-air respirator with a full face-piece.

Any supplied-air respirator that has a tight-fitting face-piece and is operated in a continuous-flow mode.

25,000 PPM- Any supplied-air respirator with a full face-piece and operated in a pressure-demand or other positive pressure mode.

ESCAPE- Any appropriate escape-type, self-contained breathing apparatus.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 31 min

EYE/FACE PROTECTION: Employee must wear splash-proof or dust-resistant safety goggles to prevent eye contact with this substance.

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EMERGENCY EYE WASH: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Methanol 67-56-1

APPEARANCE	Clear watery liquid
COLOR	Colorless
ODOR	Slight alcohol odor
ODOR THRESHOLD:	100ppm
pH:	No data available
MOLECULAR WEIGHT:	32.04
MELTING POINT:	-137° F (-94°C)
BOILING POINT:	149° F (65° C)
SPECIFIC GRAVITY:	0.7914
DENSITY (25C):	0.7866 g/ml
VAPOR PRESSURE:	97.25 mm HG @20°C
VAPOR DENSITY:	1.11
WATER SOLUBILITY:	Very Soluble
PARTITION COEFFICIENT N-OCTANOL/WATER: log Pow:	-0.77
FLASH POINT (cc):	11°C (52°F)
EVAPORATION RATE (butyl acetate=1):	4.6
UPPER FLAMMABILITY LIMIT:	36%
LOWER FLAMMABILITY LIMIT:	6%
AUTOIGNITION TEMPERATURE:	385°C (725°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	0.59 CPS @ 20° C
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available
SOLVENT SOLUBILITY:	Soluble in alcohol, acetone, chloroform, ethanol, ether, benzene

9.2 OTHER INFORMATION: No data available

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY:

Containers may rupture or explode if exposed to heat.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

Stable under normal conditions of use. In use, may form flammable/explosive vapor-air mixture. Product is Hygroscopic

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

Vapors may form explosive mixtures with air.

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Direct sunlight.

10.5 INCOMPATIBLE MATERIALS --> METHYL ALCOHOL (METHANOL):

ACETYL BROMIDE: Violent reaction with formation of hydrogen bromide.

ALKYLALUMINUM SOLUTIONS: Violent reaction.

ALUMINUM: Corrodes.

BARIUM PERCHLORATE: Distillation yields highly explosive alkyl perchlorate.

BERYLLIUM HYDRIDE: Violent reaction, even at -196°C.

BROMINE: Vigorously exothermic reaction.

CALCIUM CARBIDE: Violent reaction.

CHLORINE: Possible ignition and explosion hazard.

CHLOROFORM AND SODIUM HYDROXIDE: Explosive reaction.

CHROMIUM TRIOXIDE (CHROMIC ANHYDRIDE): Possible ignition.

CYANURIC CHLORIDE: Violent reaction.

DICHLOROMETHANE: Possible ignition and explosion.

DIETHYL ZINC: Possible ignition and explosion.

HYDROGEN PEROXIDE + WATER: Explosion hazard.

IODINE + ETHANOL + MERCURIC OXIDE: Explosion hazard.

LEAD: Corrodes.

LEAD PERCHLORATE: Explosion hazard.

MAGNESIUM: Violent reaction

MAGNESIUM (POWDERED): Mixtures are capable of detonation.

METALS: Incompatible.

NICKEL: Possible ignition in the presence of nickel catalyst.

NITRIC ACID (CONCENTRATED): Mixtures of greater than 25% acid may decompose violently.

OXIDIZERS (STRONG): Fire and explosion hazard.

PERCHLORIC ACID: Explosion hazard.

PHOSPHOROUS TRIOXIDE: Possible violent reaction and ignition.

PLASTICS, RUBBER, COATINGS: May be attacked.

POTASSIUM: Possible dangerous reaction.

POTASSIUM HYDROXIDE + CHLOROFORM: Exothermic reaction.

POTASSIUM TERT-BUTOXIDE: Fire and explosion hazard.

SODIUM + CHLOROFORM: Possible explosion.

SODIUM HYPOCHLORITE: Explosion hazard.

SODIUM METHOXIDE + CHLOROFORM: Violent reaction.

SULFURIC ACID: Fire and explosion hazard.

ZINC: Explosion hazard.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS --> Flammable gases, Smoke, Carbon Monoxide, Carbon dioxide, formaldehyde, where combustion is not complete

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Inhalation: Irritation of the mucous membranes, difficulty breathing, sharp pains,

Skin: Contact with liquid may cause irritation. Absorption through skin causes metabolic acidosis and effects eyes and central nervous system as with ingestion.

Eyes: Vapors may cause irritation. High concentrations have been reported to cause violent inflammation of the conjunctiva and epithelial defects on the cornea.

Ingestion: Can cause inebriation, drowsiness, difficulty breathing, severe pain, vomiting, convulsions, unconsciousness, and coma. Effects on the eye from ingestion, include blurred or dimmed vision, dilated perception, photophobia, and optic nerve atrophy. Partial and full blindness can occur. Liver, kidney, heart, stomach, intestinal and pancreatic damage can occur. Death may be due to respiratory failure or circulatory collapse. As little as 15 ml has caused blindness. The usual fatal dose is 16-240 ml.

CHRONIC EFFECTS:

Inhalation: Repeated or prolonged exposure may cause effect as in acute ingestion, headaches, diminution of vision and enlargement of the liver.

Skin: Defatting of the skin resulting in erythema, scaling and dermatitis.

Ingestion: Radiated ingestion may cause visual impairment, blindness and other systemic effects including cancer.

Eyes: Repeated or prolonged contact may cause conjunctivitis.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute animal toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50 (Rabbit)	Inhalation LC50	
METHANOL	1187mg/kg -2769mg/kg	17100mg/kg	87.6mg/L/6hr	

SKIN CORROSION/IRRITATION : Irritating to skin.

SERIOUS EYE DAMAGE/EYE IRRITATION: Irritating to eyes. Risk of serious damage to eyes.

RESPIRATORY IRRITATION: Irritating to respiratory tract.

RESPIRATORY OR SKIN SENSITIZATION: No data available

MUTAGENIC EFFECTS:

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available.

SPECIFIC TARGET ORGAN TOXICITY (STOT-SE) - Single Exposure (Globally Harmonized System)

Causes damage to organs.

SPECIFIC TARGET ORGAN TOXICITY (STOT-RE) - Repeated Exposure (Globally Harmonized System)

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

11.2 ADDITIONAL DATA:

AT INCREASED RISK FROM EXPOSURE: Persons with kidney, eye or skin disorders.

RTECS# PC1400000

12. ECOLOGICAL INFORMATION

DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and wildlife officials.

Notify operators of nearby water intakes.

12.1 ACUTE AQUATIC TOXICITY:

Toxicity to fish:

LC50 - *Lepomis macrochirus* (Bluegill) - 15,400.0 mg/L - 96 h

LC50 – *Pimphales promelas* (Fathead Minnow) – 28200 mg/L – 96 h

LC50 – Oncorhynchus mykiss (Rainbow Trout) – 19500-20700 mg/L – 96 h
NOEC - Oryzias latipes - 7,900 mg/L - 200 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/L - 48 h

Toxicity to algae Growth inhibition:

EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/L -96hr

12.2 PERSISTANCE AND DEGRADABILITY: Result: 72 % - rapidly biodegradable

12.3 BIOACCUMULATIVE POTENTIAL: Cyprinus carpio (Carp) - 72 d at 20 °C

Bio-concentration factor (BCF): 1.0

Biochemical Oxygen Demand (BOD): 600 - 1,120 mg/g

Chemical Oxygen Demand (COD): 1,420 mg/g

No indication of bioaccumulation potential.

12.4 MOBILITY IN SOIL: Mobile

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to enter streams, sewers and other waterways.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

The waste material should be treated and/or disposed of at site authorized to handle hazardous chemical waste. Appropriate Federal, State and Local Regulatory Authorities should be contacted before discharge, treatment or disposal of waste material.

CONTAMINATED PACKAGING: Dispose of as unused product.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID numbers are: U154 and D001

If the waste is a spent solvent, the appropriate spent solvent code should be used.
DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO

GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

Land Transport (DOT)

- 14.1 USDOT ID Number-----> UN1230
- 14.2 USDOT Shipping Name-----> Methyl Alcohol
- 14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)
USDOT Label Codes-----> 3, 6.1
- 14.4 USDOT Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> No
Emergency Response Guide-----> 127
Reportable quantity-----> 5000lbs.

Special Provisions:

T8; Refers to transportation of IM portable tanks

Packaging authorizations: Exceptions: None

Non-bulk packaging: 173.202: for liquid hazardous material in packing group II

Bulk-packaging: 173.242: for liquid hazardous material

Quantity Limitations: Passenger aircraft or railcar: 1 L

Cargo aircraft only: 60 L

Vessel stowage requirements: B

Sea Transport (IMDG)

- 14.1 ID Number-----> UN1230
- 14.2 Proper shipping name-----> METHANOL
- 14.3 Hazard Classification-----> 3, 6.1
Label Codes-----> 3, 6.1
- 14.4 Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> Yes
EMS-Number-----> F-E, S-D

Air Transport (IATA)

- 14.1 ID Number-----> UN1230
- 14.2 Proper shipping name-----> Methanol
- 14.3 Hazard Classification-----> 3, 6.1
Label Codes-----> 3, 6.1
- 14.4 Package Code-----> II
- 14.5 Environmental hazard-----> No
- 14.6 Special precautions for user-----> No

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed as a toxic chemical

SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard and Fire Hazard

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed Reportable Quantity - 5,000 pounds.

SECTION 101(14) Reportable Quantity: 5,000 lbs

RCRA (Resource Conservation and Recovery Act.)

40 CFR 261.33 Hazardous Waste Number: U154

**Massachusetts Right to Know Components
Methanol CAS-No.67-56-1**

**Pennsylvania Right to Know Components
Methanol CAS-No.67-56-1**

**New Jersey Right to Know Components
Methanol CAS-No.67-56-1**

California Prop. 65 Components

WARNING: This product does contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Methanol

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemicals Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No

<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A Chemical Safety Assessment has been carried out for this substance.

16. OTHER INFORMATION

Hazard Rating:

- 4-Extreme**
- 3-High**
- 2-Moderate**
- 1-Slight**
- 0-Insignificant**

NFPA RATINGS (SCALE 0-4):	Health=2	Fire=3	Reactivity=0
HMIS RATINGS (SCALE 0-4)	Health=2	Fire=3	Reactivity=0 PPE=G

Text of hazard statement codes in Section 2 and 3:

H225 Highly flammable liquid and vapor.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled

H370 Causes damage to organs.

Date of preparation-----> November 19, 2013

Revision Number-----> 4.8

Revision Content-----> Updated Section 1, Added new product number

Revision Date-----> August 27, 2020

Prepared by-----> T.G. Fenstermaker Jr.

Product specification sheets are also available.

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American National Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation

EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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