G.K. Chemical Specialties Co. Inc.
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SAFETY DATA SHEET (SDS)

PRODUCT NAME: METHANOL	
HEALTH HAZARD RATING:	(1)- LOW HAZARD NFPA Rating
FLAMMABILITY HAZARD RATING:	(3)- HIGH. HAZARD
REACTIVITY HAZARD RATING:	(0)- MINIMAL HAZARD
PERSONAL PROTECTION:	H - (Splash goggles, Gloves, Synthetic apron, Vapor respirator)
HAZARD ALERT SIGN:	

SECTION 1 – IDENTIFICATION	
PRODUCT IDENTIFIER	
PRODUCT NAME	METHANOL
MANUFACTURER'S NAME AND ADDRESS **EMERGENCY PHONE NO.**	G.K. Chemical Specialties Co. Inc. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605/ 416-526-4037
SUPPLIER'S NAME AND ADDRESS **EMERGENCY PHONE NO.**	
CHEMICAL NAME	METHYL ALCOHOL
CHEMICAL FAMILY	ALCOHOL Formula: CH_3OH
TRADE NAME AND SYNONYMS	METHANOL, METHYL ALCOHOL, METHYL HYDRATE, WOOD SPIRIT, METHYL HYDROXIDE
MATERIAL USE	INDUSTRIAL, COMMERCIAL, LABORATORY USE

G.K. Chemical Specialties Co. Inc. has compiled the information and recommendations contained in this Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation.

G.K. Chemical Specialties Co. Inc. extends no warranty and assumes no responsibility as to the accuracy of the content or sufficiency of the information and expressly disclaims all liability for reliance thereon. This SDS provides guidelines for the safe handling of this product. It does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

G.K. Chemical Specialties Co. Inc. assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

INGREDIENTS. This SDS, under section of Ingredients, contains all ingredients listed under INGREDIENT DISCLOSURE LIST P.C. 1987-2719, 20/1/88 CANADA GAZETTE PART II VOL. 122, No 2 of HAZARDOUS PRODUCT ACT.
Percentage range of concentration of ingredients is expressed as percentage by weight of the total weight of the product. Ingredient List does not necessarily list all ingredients in the formulation and does not necessarily list all ingredient range of concentration, other than ingredients under the Disclosure List.

T.L.V. (units) or Threshold Limit Values refer to the limiting concentrations recommended by the Ministry of Labour. These values were adopted by the American Conference of Governmental Industrial Hygienists (A.C.G.I.H.). The figures refer to time-weighted average concentrations as P.P.M. (V/V) or mg/m^3 for a normal working day or at any time for some materials.

"C.A.S REG. No." means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.

"LC 50" means the concentration of a substance in air that when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.
"LD 50" means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause death of 50 per cent of a defined animal population.

FLASH POINT. The minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite.

NIOSH- National institute for occupational safety and health
STEL- Short term exposure limit
TWA- Time-weighted average
PEL- Permissible exposure limit
ACGIH- American conference of governmental industrial hygienist
OSHA- Occupational safety and health act

SECTION 2 – HAZARD IDENTIFICATION

Dangerous Goods: **WHMIS:** Class 3, Subsidiary Risk 6.1, Packing Group II

GHS CLASSIFICATION
Acute Toxicity (inhalation) – Category 3
Acute Toxicity (oral, dermal) – Category 3
Eye Damage/ Irritation –Category 2
Skin Corrosion/Irritation – Category 2
Skin Sensitization – Category 1
Germ Cell Mutagenicity – Category 2
Carcinogenicity- Category 1B
Toxic to Reproduction – Category 2
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Flammable liquids- Category 2
Toxic to the Aquatic Environment- Acute Hazard – Category 2

HAZARDOUS SUBSTANCE (HSNO) CLASSIFICATION
Flammable Liquid – Category 3.1B
Oral, Inhalation, Dermal – Category 6.1C
Eye Irritant- Category 6.4A
Reproductive/ Developmental Toxicant – Category 6.8B
Specific target organ toxicity- Category 6.9A
Terrestrial Vertebrate Eco toxicity – Category 9.3C

GHS Label Elements, including precautionary statements: Hazard Statements:
Signal word- DANGER: May be fatal if swallowed,

HAZARD STATEMENTS
H302- Harmful if swallowed
H226- Flammable liquid and vapor.
H301- Toxic if swallowed
H311- Toxic in contact with skin.
H331- Toxic if inhaled
H370- Causes damage to organs

PREVENTION
P210- Keep away from heat/sparks/open flames/hot surfaces- No smoking
P261- Avoid breathing dust/fumes/gas/mist/vapors/spray
P233- Keep container tightly closed
P240- Ground/bond container and receiving equipment
P241- Use explosion-proof electrical, ventilating, lighting and other equipment.
P242- Use only non-sparking tools.
P264- Wash hands and skin thoroughly after handling

RESPONSE
P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes: Remove contact lenses if present and easy to do so. Continue rinsing.
P301 + P310: If swallowed: Immediately call a POISON CENTER or doctor/ physician.
P304 +P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

	P361: Remove/Take off immediately all contaminated clothing. P370 +P379: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P403 +P233: Store in a well –ventilated place. Keep container tightly closed. **POTENTIAL HEALTH EFFECTS** May cause damage to central nervous system through prolonged or repeated exposure. May cause fetotoxic (toxic to the fetus during the later stages of pregnancy) and teratogenic effects (causing malformations of the fetus), based on animal information **INHALATION:** May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. Can cause irritation of mucous membranes and central nervous system depression. **SKIN**: May be harmful if absorbed through skin. Causes skin irritation **INGESTION:** May be fatal if swallowed
	FLAMMABLE LIQUID AND VAPOUR: Burns with a clean, clear flame, which is almost invisible in daylight, or a light blue flame

SECTION 3 – **COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS INGREDIENTS	APPROXIMATE CONCENTRATION%	C.A.S., N.A. OR U.N. NUMBERS	LD50 {SPECIFY SPECIES & ROUTE}	LC 50 {SPECIFY SPECIES & ROUTE}
Methanol	➢ 99	67-56-1	Oral(Rat): 5628 mg/kg Dermal (Rabbit): 15,800mg/kg. Inhalation: rat-8 h : 64,000 ppm	

SECTION 4 – **FIRST AID MEASURES**

SKIN CONTACT	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
EYE CONTACT	Immediately hold eyelids open and flush with water for at least 15 minutes. Seek medical attention.
INHALATION	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary
INGESTION	May be harmful if swallowed. Do not induce vomiting. Drink 1 or 2 glasses of water. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
NOTES TO PHYSICIAN	Treatment based on sound judgment of physician and individual reaction of patient. Onset of symptoms may be delayed for 18 to 24 hours after digestion. Ethanol significantly decreases the toxicity of methanol because it competes for the same metabolic enzymes and has been used to treat methanol poisoning

SECTION 5 – FIRE-FIGHTING MEASURES	
FLASH POINT (^{0}C)	CLOSED CUP: 11.667^{0}C (53^{0}F)- 12.778^{0}C (55^{0}F) (TAG)
FLASH POINT METHOD	Closed Cup or Tag
AUTOIGNITION TEMPERATURE (^{0}C)	464^{0}C (867.2^{0}F)
UPPER FLAMMABLE LIMIT (% VOL.)	36,5 %
LOWER FLAMMABLE LIMIT (% VOL.)	6 %
HAZARDOUS COMBUSTION PRODUCTS	Carbon Dioxide (CO_2), Carbon monoxide, Formaldehyde
UNUSUAL FIRE/ EXPLOSION HAZARDS	Risks of explosion of the product in presence of mechanical impact: No. Explosive in presence of open flames, sparks, or heat.
SENSITIVITY TO MECHANICAL IMPACT	No.
SENSITIVITY TO STATIC DISCHARGE	Yes but low
EXTINGUISHING MEDIA	Water spray, foam, dry powder or Carbon Dioxide. Use media appropriate for surrounding fire
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should wear full protective clothing, including self-contained breathing equipment. Vapor may travel considerable distance to source of ignition and flash back. CAUTION: MAY BURN NEAR INVISIBLE FLAME. Concentrations of greater than 25% methanol in water can be ignited

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
LEAK AND SPILL PROCEDURE	Stop leak. Move containers from spill area. Absorb spill with vermiculite or other noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination.
ENVIRONMENTAL PRECAUTIONARY	Prevent entry into sewers or streams. Any release to the environment may be subject to federal or local reporting requirements.
PERSONAL PRECAUTIONARY MEASURES	Wear protective clothing during cleanup. See section 8 for recommendations on the use of personal protective equipment. Avoid breathing vapors, mist or gas

SECTION 7 – HANDLING AND STORAGE	
HANDLING PROCETURES	Avoid contact with eyes. Avoid ingestion. Use good industrial hygiene practices in handling this product. Keep container closed when not in use. Take measure to prevent the buildup of electrostatic charge
STORAGE NEEDS	Keep container tightly closed. Store in a cool area. Containers coated with copper (or copper alloys), Zinc (including galvanized steel), or Aluminum are unsuitable for storage. These materials may be attacked slowly by the Methanol.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION	
VENTILATION REQUIREMENTS	General ventilation is recommended. When TLV (Threshold Limit Value over 8 hours of work) is greater than 250 ppm (328 mg/ m^3) provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective. IDLH: 6000 ppm, acute inhalation toxicity to animals

PROTECTIVE EQUIPMENT	Ensure that eyewash stations are proximal to the work-station location. The selection of personal protective equipment will vary depending on the condition of use
EYE/TYPE	Splash goggles
RESPIRATORY/TYPE	Approved/ certified vapor respirator when airborne concentration exceed exposure limits.
GLOVE/TYPE	Nitrile, Vinyl, Butyl impervious gloves
FOOTWEAR/TYPE	Boots. Chemical resistant and as specified by the workplace
BODY/TYPE	Protective clothing is required. Use impervious clothing (apron, coveralls). The selection of personal protective equipment will vary depending on the conditions of use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE – PHYSICAL STATE	Clear thin liquid
ODOUR	Mild characteristic alcohol odour
ODOUR THRESHOLD (PPM)	4.2-5962 PPM detection
PH	Not available
MELTING POINT (^{0}C)	See freezing point
BOILING POINT (^{0}C)	64.7^{0}C (148^0 F) INITIAL
FREEZING POINT (^{0}C)	-97.8^{0}C (-144^0 F)
EVAPORATION RATE	4.1 (n-Butyl acetate =1)
FLAMMABILITY	Flammable
FLASH POINT (^{0}C)	12^{0}C (54^{0}F)
AUTO IGNITION TEMPERATURE	464^{0}C (867^{0}F)
DECOMPOSITION TEMPERATURE	Not available
VAPOUR DENSITY	(air= 1) 1.105 @ 15^{0}C
VAPOUR PRESSURE	@ 20^{0}C 33mmHg = 12.8 Kpa
SOLUBILITY	Completely soluble in water
VISCOSITY	Thin liquid
% VOLATILE BY VOLUME	100 %
SPECIFIC GRAVITY	0.82 ± 0.01 gm / cm^3 @ 20^{0}C

SECTION 10 – STABILITY AND REACTIVITY	
REACTIVITY	None known , based on information available
CHEMICAL STABILITY	Stable under normal conditions
POSSIBILITY OF HAZARDOUS REACTIONS	No
CONDITIONS TO AVOID	Keep away from heat, flame and sparks. Avoid incompatible materials
INCOMPATIBLE MATERIALS	Avoid contact with strong oxidizers, strong mineral or organic acids, and strong bases. May be corrosive to lead, Aluminum, Magnesium, and Platinum. May attack some plastic, rubber and coating materials,
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon Dioxide ($C0_2$), Carbon monoxide, Formaldehyde

SECTION 11 –TOXICOLOGICAL INFORMATION	
TOXICITY EFFECTS ON ANIMALS	**Methanol (67-56-1):** Acute oral toxicity (LD50): 1187-2769 mg/kg (Rat), LD50 dermal (Rabbit) 17,000 mg/kg, LC50 inhalation/ 4h (Rat) 1282 mg/kg

TOXIC EFFECTS ON HUMANS	Hazardous in case of ingestion or inhalation. Swallowing even small amounts of Methanol could potentially cause blindness or death. Effects of sub lethal doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Hazardous in case of skin contact (irritant, sensitizer, permeator). Methanol can be absorbed through the skin and harmful effects have been reported by this route of entry. Effects are similar to those as inhalation. Methanol is a mild to moderate eye irritant.
CHRONIC EFFECTS ON HUMANS	Prolonged contact with skin may defat tissue causing dermatitis or skin problems.
CARCINOGENICITY	No evidence
TERATOGENICITY	Methanol has produced fetotoxicity in rats exposed by inhalation to high conc.
MUTAGENICITY	No evidence
REPRODUCTIVE EFFECTS	No evidence

SECTION 12 –ECOLOGICAL INFORMATION	
ECOTOXICITY DATA	**Methanol (67-56-1):** Eco toxicity in water (LC50): 15,400-29,400 mg/l 96 hours (fish, EC50/48h/daphnia: >10,000 mg/l)
BIODEGRADABILITY	Readily Biodegradable. Does not bio accumulate. Biochemical Oxygen Demand (BOD) 600-1120 mg/g
PRODUCTS OF DEGRADATION	The product itself and its products of degradation are not toxic

SECTION 13 – DISPOSAL CONSIDERATIONS	
WASTE DISPOSAL	Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations
INFORMATION ON SAFE HANDLING FOR DISPOSAL INCLUDING ANY CONTAMINATED PACKAGING	Suitable waste facility

SECTION 14 – TRANSPORT INFORMATION	
UN NUMBER	1230 PK: II
UN PROPER SHIPPING NAME	METHANOL
TRANSPORT HAZARD CLASS	CLASS 3(6.1). Air Transport-Packing instruction 305, 1 litre maximum/ pk
PACKAGING GROUP	II
ENVIRONMENTAL HAZARDS	NO
TRANSPORT IN BULK, if applicable	NOT AVAILABLE
SPECIAL PRECAUTIONS	Guide to Canadian transportation. Emergency Response Guidebook (ERG): # 131

SECTION 15 – REGULATORY INFORMATION	
SAFETY HEALTH & ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT	U.S. TSCA inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) INVENTORY List or exempt. Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

SECTION 16 – OTHER INFORMATION	
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DATE OF THE LATEST REVISION OF SDS:	May 8, 2024