SAFETY DATA SHEET

1. Identification

Product identifier	**Methanol**	
Other means of identification	0720	
Recommended use	Solvent, fuel, raw material feedstock	
Recommended restrictions	Not for food, drug, or household use.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Nemco Resources Ltd	
Address	25 Midland Street Winnipeg, MB R3E 3J6 Canada	
Telephone	Phone: Fax: Toll Free:	204-788-1030 204-788-1593 855-755-6737 (M-F 8am-4:30pm)
Website	www.nemco.ca/msds-safety-information	
E-mail	info@nemco.ca	
Emergency phone number	NEMCO:	855-755-6737 (M-F 8am-4:30pm)
Supplier	See above.	

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
	Reproductive toxicity	Category 1B
	Specific target organ toxicity following single exposure	Category 1
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. May damage fertility or the unborn child. Causes damage to organs.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Keep container tightly closed. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves, protective clothing, eye protection and face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing mist or vapour. Use only outdoors or in a well-ventilated area.
Response	In case of fire: Use appropriate media to extinguish. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Call a POISON CENTRE if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. IF INHALED: remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. Specific treatment (see information on this label). IF exposed or concerned: Get medical attention.
Storage	Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Disposal	Dispose of container in accordance with local, regional, national and international regulations.
Other hazards	None known.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Methanol		67-56-1	80-100*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

4. First-aid measures

Inhalation IF INHALED: remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. Specific treatment (see information on this label).

Skin contact IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse. Call a POISON CENTER or doctor if you feel unwell.

Eye contact Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Ingestion IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Rinse mouth. Specific treatment (see information on this label).

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation. Symptoms may include stomach distress, nausea or vomiting.

Indication of immediate medical attention and special treatment needed Symptoms may be delayed. Treat patient symptomatically.

General information IF exposed or concerned: Get medical advice. 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. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Keep out of reach of children.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

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

Specific hazards arising from the chemical 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.

Hazardous combustion products May include and are not limited to: Oxides of carbon. Formaldehyde.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Highly flammable liquid and vapour.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapour. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Never return spills in original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions Do not discharge into lakes, streams, ponds or public waters.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Vapours may form explosive mixtures with air. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid contact with eyes, skin and clothing. Wear appropriate personal protective equipment. Do not breathe mist or vapour. Do not taste or swallow. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep out of the reach of children.

8. Exposure controls/Personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

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

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

Components	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)

Components	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)

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

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

Components	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)

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

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Methanol (CAS 67-56-1)	15 minute	250 ppm
	8 hour	200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	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

See above

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)	Danger of cutaneous absorption

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)	Danger of cutaneous absorption

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) 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.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles are recommended.

Skin protection

Hand protection Wear protective gloves.

Other As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Not applicable.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practices. Wash hands after handling and before eating. When using, do not eat, drink or smoke.

9. Physical and chemical properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid
Colour	Clear
Odour	Alcohol
Odour threshold	4.2 - 5960 ppm
pH	Not applicable
Melting point/freezing point	-97.8 °C (-144.04 °F)
Initial boiling point and boiling range	64.7 °C (148.46 °F)
Flash point	11.0 °C (51.8 °F) TCC
Evaporation rate	4.1 (BuAc=1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	6 %
Flammability limit - upper (%)	36.5 %
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	12.8 kPa @ 20°C
Vapour density	1.105 [Air = 1]
Relative density	0.791
Solubility(ies)	
Solubility (water)	Complete

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	464 °C (867.2 °F)
Decomposition temperature	Not available.
Viscosity	0.75 cSt @ 40°C
Other information	
VOC	100 % w/w

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Do not mix with other chemicals.
Incompatible materials	Acids. Alkalis. Strong oxidising agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Formaldehyde.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Toxic by inhalation. May cause damage to organs by inhalation.
Skin contact	Toxic in contact with skin.
Eye contact	No adverse effects due to eye contact are expected.
Ingestion	Toxic if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Toxic by inhalation. Toxic in contact with skin. Toxic if swallowed.

Although the lethal dose of methanol is high for most experimental animals (> 2000 mg/kg bw after single oral administration) these data are not employed for classification. The classification is only based upon the experiences in humans and classifies methanol as acutely toxic by oral, dermal and inhalative exposure and, furthermore, as capable of inducing serious irreversible effects upon single exposure by all of these routes. (ECHA 2020)

Components	Species	Test Results
Methanol (CAS 67-56-1)		
Acute		
Dermal		
LD50	Rabbit	17100 mg/kg, ECHA
Inhalation		
LC50	Cat	43.7 mg/L, 6 Hours, ECHA
Oral		
LD50	Human	143 - 300 mg/kg, HSNO CCID/Sigma-Aldrich
	Rat	1187 - 2769 mg/kg, ECHA

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	No adverse effects due to eye contact are expected.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.

Respiratory or skin sensitisation

Respiratory sensitisation	Not available.
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 available.
Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity - single exposure	Causes damage to organs. Kidneys. Liver.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Causes damage to organs.
Further information	Not available.

12. Ecological information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Methanol (CAS 67-56-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/L, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	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	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	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

General Canada: TDG Proof of Classification: Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1230
Proper shipping name	METHANOL
Hazard class	3
Subsidiary hazard class	6.1
Packing group	II
Special provisions	43

TDG

15. Regulatory information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by the HPR.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

Methanol (CAS 67-56-1) 1 TONNES

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS status Hazardous

International regulations

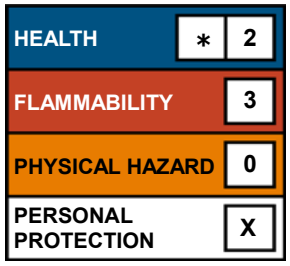
Inventory status

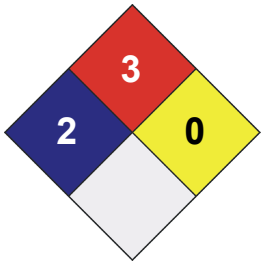
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





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Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

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