

****MATERIAL SAFETY DATA SHEET****

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME CAM2 Windshield Wash Pre-Mix -20°F
 PRODUCT CODE 27875
 MANUFACTURER'S NAME AND ADDRESS CAM2 Oil Products Co.
 380 West Butler Avenue
 New Britain, PA 18901
 (215) 340-2262
 EMERGENCY PHONE NUMBER Chem Tel, Inc.
 1-800-255-3924

SECTION II - HAZARDOUS INGREDIENTS

Component	CAS No.	Vol. %	Exposure Limits			
			ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL TWA	OSHA PEL STEL
Methanol	67-56-1	33%	200 ppm	250 ppm	200 ppm	250 ppm

NOTE: ACGIH, TLV and OSHA PEL have a "skin" notation indicating potential contribution to the overall exposure by the cutaneous route, including mucous membranes and eye, either by airborne, or particularly, by direct contact with the substance. NIOSH has a REL of 200 ppm as a TWA and 800 ppm as a ceiling value (15 minutes). The NIOSH IDLH is 25,000 ppm.

- ACGIH - American Conference of Governmental Industrial Hygienists
- OSHA - Occupational Safety and Health Administration
- TLV - Threshold Limit Value
- STEL - Short-Term Exposure Limit
- PEL - Permissible Exposure Limit
- TWA - Time-Weighted Average
- NIOSH - National Institute for Occupational Safety and Health
- REL - Recommended Exposure Limit
- IDLH - Immediately Dangerous to Life and Health
- Ceiling Value - Airborne value not to be exceeded

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SECTION III - PHYSICAL DATA

APPEARANCE: Clear blue liquid
ODOR: Faint characteristic alcoholic odor
BOILING POINT: 64°C
MELTING POINT: -97°C
SOLUBILITY: Miscible with water, alcohols, esters, ketones, diethyl ether, benzene halogenated hydrocarbons, and most organic solvents.
SPECIFIC GRAVITY: 0.960
(Water=1.0)
VAPOR DENSITY: 1.1 AT 20°C
(Air=1.0)
VAPOR PRESSURE: 96mm Hg at 20°C
Ph: Not available

SECTION IV - FIRE AND EXPLOSION

FLASH POINT: 37.8°C (open cup)
FLAMMABLE LIMITS (% BY VOLUME)
LOWER EXPOSURE LIMIT (LEL): 6
UPPER EXPOSURE LIMIT (UEL): 36.5
AUTOIGNITION TEMPERATURE: 385°C

FIRE FIGHTING PROCEDURES/FIRE EXTINGUISHING MEDIA: Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Wear NIOSH approved self-contained breathing respirator in the positive pressure mode and chemical protective clothing specifically recommended for methanol. Use halon or carbon dioxide extinguishers or alcohol foam for small fires. Water spray or fog can cool fire but may not be effective in extinguishing fire. Stay away from ends of tanks. Containers may explode in heat of fire. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Isolate for 1/2 mile in all directions if tank car or truck is involved.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dangerous fire and explosion hazard when exposed to heat or flame. Methanol is extremely flammable and forms explosive mixtures with air. Methanol vapors may travel considerable distance to a source of ignition and flash back.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATING

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

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SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions.

POLYMERIZATION: Hazardous polymerization does not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Excessive heating and/or incomplete combustion will produce carbon monoxide and toxic vapors such as formaldehyde.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, aluminum, zinc, or metals that displace hydrogen, rubber and rubber-based coatings, chromic anhydride, lead perchlorate and perchloric acids.

SECTION VI - SPILL OR LEAK PROCEDURES

Shut off all sources of ignition. No smoking or flares in the spill area. Restrict access to spill area, and move unprotected personnel upwind of the area. Keep out of low areas. Allow only trained personnel wearing appropriate protective clothing and self-contained respirator in the positive pressure mode in the vicinity of the spill. Do not touch spilled material; stop leak if you can do so without risk. If fire potential exists, cover spill with foam. Prevent methanol from entering water bodies, drains, and any sewage collection systems. Methanol will float on water and the runoff will present an explosion or fire hazard. For small spills take up with sand or other non-combustible absorbent material and place into containers for later disposal. Control large spills by diking. Dispose all spill material in accordance with federal, state, and local regulations. Methanol spills over the reportable quantity (5,000 lbs.) should be reported to the National Response Center (800-424-8802).

SECTION VII - WASTE DISPOSAL METHODS

Waste must be disposed in accordance with federal, state, and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Do not use air-purifying respirator. Use appropriate NIOSH-approved supplied air or self-contained respirator in accordance with 29 CFR 1910.132 and 1910.134, to prevent overexposure. Respirators must be selected based on the airborne levels found in the workplace and must not exceed the working limits of the respirator.

EYE PROTECTION: Use splash-proof chemical safety goggles or appropriate full-face respirator. Follow the eye and face protection guidelines of 29 CFR 1910.132 and 1910.133. Where there is any possibility that an individual's eyes may be exposed to methanol, an eye wash fountain (in accordance with 29 CFR 1910.151) should be within the immediate work

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(Section VIII - Special Protection Information Cont.)

area for emergency use. Contact lenses should not be worn when working with this chemical.

PROTECTIVE GLOVES: Use natural rubber or neoprene gloves.

VENTILATION: Provide local ventilation to maintain exposure levels below recommended exposure limits. Use explosion-proof ventilation.

OTHER: Where there is a possibility of exposure to an individual's body to methanol, facilities for quick drenching of the body should be provided (in accordance with 29 CFR 1910.151) within the immediate work area for emergency use. Such individuals should be provided with and required to use impervious clothing in accordance with 29 CFR 1910.132.

SECTION IX - SPECIAL PRECAUTIONS

STORAGE: Store in a well-ventilated place in accordance with 29 CFR 1910.106 away from sources of ignition, combustibles, oxidizing materials, and acid. Store in an area equipped with automatic sprinklers or fire extinguishing system. Large quantities should be stored in metal tanks or drums. Ground and bond metal storage containers and all transfer lines to prevent possible ignition from static sparks. Use spark-resistant equipment to store methanol. Containers of this material may be hazardous when emptied. Since emptied containers retain product residues, assume emptied containers to have the same hazards as full containers. Wear appropriate protective equipment when handling methanol. Follow all federal, state, and local regulations, as well as insurance codes when storing and handling methanol.

SECTION X - TRANSPORTATION DATA/DOT SHIPPING INFORMATION

PROPER SHIPPING NAME: Methyl alcohol
HAZARD CLASS: 3, (flammable liquid, poison)
SHIPPING I.D. NO.: UN-1230
PG: II
LABELING: Flammable liquid, poison
PLACARD: Flammable

SECTION XI - HUMAN HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation, ingestion, skin, and eye contact.

ACUTE EFFECTS: Ingestion of methyl alcohol or inhalation of high levels of methyl alcohol vapor may produce headache, weakness, drowsiness, light-headedness, nausea, vomiting, drunkenness, irritation of the eyes, and

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(Section XI - Human Health Hazard Data Cont.)

blurred vision. There is usually a latency period during which the acute symptoms may disappear, then relapse. Symptoms during the relapse include nausea, vomiting, dizziness, and headache. Visual disturbances up to and including blindness almost always occur during the relapse. Liver toxicity may also occur. Eye irritation can occur if the liquid or high levels of the vapor get into the eye. Methanol also acts as a defatting agent on the skin, which can result in dermatitis.

CHRONIC EFFECTS: Chronic exposure to methanol can result in headache, dizziness, nausea, vomiting, weakness, vertigo, chills, unsteady gait, dermatitis, edema of the arms, gastric pain, insomnia, blurred vision, constricted visual fields, changes in color perception, double vision, and blindness. Methanol has also been reported to cause shooting pains in the lower extremities and multiple neuritis, characterized by numbness and prickling on the skin, and shooting pain in the back of the hands and forearms. Sleep disturbances and digestive problems may also occur. Methanol is a defatting agent and can cause dermatitis.

POTENTIAL ADVERSE CHEMICAL INTERACTIONS: Persons with existing skin, kidney, liver, or eye disorders may be at increased risk when exposed to methanol. Methanol may enhance the toxicity of carbon monoxide.

CARCINOGEN STATUS:
OSHA - No
NIOSH - No
National Toxicology Program - No
IARC - No
EPA - No

This chemical is not considered to be carcinogenic by OSHA, NIOSH, NTP, IARC, or EPA.

SECTION XII - ANIMAL TOXICITY DATA

ORAL:	Rat LD (50)	5.6 g/kg
	Mouse LD (LO)	0.42 g/kg
	Rabbit LD (50)	14.4 g/kg
	Monkey LD (50)	7.0 g/kg
	Human TL (LO)	3.4 g/kg
	Human LD (LO)	6.4 g/kg
DERMAL:	Rabbit LD (50)	15.8 g/kg
	Monkey LD (LC)	0.39 g/kg

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(Section XII - Animal Toxicity Data Cont.)

INHALATION: Cat LC (50) 65,700 ppm (4.5 hrs.)
 Cat LC (50) 33,600 ppm (6 hrs.)

LC (50) = Air concentration that is lethal to 50% of a given species in a given period of time.

TL (LO) = Lowest dosage that is toxic to a given species.

LD (LO) = Lowest lethal dose in a given species by a given route of exposure.

LD (50) = Dose that is lethal to 50% of a given species by a given route of exposure.

SECTION XIII - EMERGENCY FIRST AID PROCEDURES

INHALATION: Move the exposed person to fresh air at once and call emergency medical care. If breathing has stopped, give artificial respiration. If breathing is difficult, give humidified oxygen.

SKIN CONTACT: If this chemical contacts the skin, promptly wash the contaminated skin with soap and water. If this chemical penetrates the clothing, promptly remove the clothing and wash the skin with soap and water. Systemic effects may be delayed by 18 to 72 hours; therefore, keep individual under observation.

EYE CONTACT: If the chemical contacts the eyes, immediately wash the eyes with large amounts of room temperature water for at least 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately. A follow-up visit to an ophthalmologist should be made. Contact lenses should not be worn when working with this chemical.

INGESTION: If the chemical is ingested and the person is conscious, induce vomiting immediately, then give 2 teaspoons of baking soda in a glass of water. Do not induce an unconscious person to vomit. Get medical attention immediately.

SECTION XIV - REGULATORY STATUS

SARA TITLE III

Section 302 and 304: Extremely Hazardous Substances (40 CFR 355)

COMPONENT	CAS No.	TPQ (lbs)	RQ (lbs)
None	Not Applicable	Not Applicable	Not Applicable

NOTE: TPQ - Threshold Planning Quantity
RQ - Reportable Quantity

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(Section XIV - Regulatory Status Cont.)

Section 311: Hazard Categorization (40 CFR 370)

ACUTE	CHRONIC	FIRE	PRESSURE	REACTIVE
(X)	(X)	(X)	()	()

Section 313: Toxic Chemicals (40 CFR 372.65)

COMPONENT	CAS No.	WT %
Methanol	67-56-1	99.85

CERCLA

Section 102(a): Hazardous Substances (40 CFR 302.4)

COMPONENT	CAS No.	WT %	RQ (lbs)
Methanol	67-56-1	99.85	5,000

RCRA

40 CFR 261.33 Hazardous Waste Number

Methanol waste and material contaminated with methanol would be regulated as a hazardous waste material under the hazardous waste number U154.

TSCA

Methanol is listed on the TSCA inventory.

****NOTE:** Most of these requirements are for Methanol. Since our solution is 33% Methanol by volume, the requirements listed above are very strict. In all cases, "The Solution" will not be as hazardous as pure Methanol.

May 1, 1997