

Safety Data Sheet

**Material Name: TFI PREMIUM WINDSHIELD WASHER FLUID CONCENTRATE
EXTREME WINTER, WINTER, AND ALL SEASON FORMULAS**

SDS ID: 820202

*** Section 1 - Identification ***

Product Identifier

TFI PREMIUM WINDSHIELD WASHER FLUID CONCENTRATE
EXTREME WINTER, WINTER, AND ALL SEASON FORMULAS

Synonyms

Methanol

Recommended Use

This product must be diluted prior to use. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

DILUTE WITH WATER PRIOR TO USE, IN ACCORDANCE WITH THE TABLE BELOW (water:concentrate)

	MIX RATIO	FREEZE PROTECTION
ALL SEASON	10:1	+20
WINTER	5:1	0
EXTREME WINTER	2.8:1	-20

Restrictions on Use

None known.

Manufacturer Information

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*** Section 2 - Hazard(s) Identification ***

Classification in Accordance with 29 CFR 1910.1200.

Flammable liquid, Category 2
Acute toxicity, Oral, Category 3
Acute toxicity, Dermal, Category 3
Acute toxicity, Inhalation, Category 3
Specific target organ toxicity – Single exposure Category 1

GHS LABEL ELEMENTS

Symbol(s)



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Signal Word

DANGER!

Hazard Statement(s)

Highly flammable liquid and vapor.

Toxic if swallowed or in contact with skin.

Toxic if inhaled.

Causes damage to organs.

Precautionary Statement(s)

Prevention

Keep container tightly closed. Keep away from heat/sparks/open flames and hot surfaces: No smoking. Ground/Bond container and receiving equipment. Use explosion proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye and face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.

Response

In case of fire, use media appropriate for extinction. IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Wash with plenty of soap and water. Take off immediately all contaminated clothing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

Dispose of in accordance with all applicable federal, state and local regulations.

Hazard(s) Not Otherwise Classified

None known.

*** Section 3 - Composition / Information on Ingredients ***

CAS	Component	Percent
67-56-1	Methyl alcohol	95-100
Not Available	Additives	<1

*** Section 4 - First Aid Measures ***

Description of Necessary Measures

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

IF ON SKIN: Wash with plenty of soap and water. Take off immediately all contaminated clothing.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

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Most Important Symptoms/Effects

Acute

Central nervous system damage, eye damage, blindness, systemic toxicity damage.

Delayed

Reproductive effects, central nervous system damage, eye damage, blindness.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

IF exposed: Call a POISON CENTER or doctor/physician. Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-350-7565 for additional information.

*** Section 5 - Fire-Fighting Measures ***

Suitable Extinguishing Media

Alcohol resistant foam, dry chemical, carbon dioxide, water spray.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Specific Hazards Arising from the Chemical

Flammable liquid and vapor. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Product may be sensitive to static discharge, which could result in fire or explosion. Vapors may form explosive mixture with air. Fire may produce irritating, poisonous and/or corrosive fumes. Empty product containers may retain product residue and can be dangerous. Containers may rupture or explode.

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon dioxide, carbon monoxide, and other toxic gases.

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams.

Cool containers with water spray until well after the fire is out. Avoid inhalation of material or combustion by-products.

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

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

*** Section 6 - Accidental Release Measures ***

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Clean Up

Remove all ignition sources. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

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*** Section 7 - Handling and Storage ***

Precautions for Safe Handling

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use explosion proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use only outdoors or in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Wear protective gloves/protective clothing/eye and face protection. Do not smoke while using this product. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.. Wear protective gloves/protective clothing/eye and face protection.

Conditions for Safe Storage, Including Any Incompatibilities

Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Keep container tightly closed. Keep cool. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous. Protect from sunlight. Store in a well-ventilated place. See **Section 14:** for Packing Group information.

Incompatibilities

Halocarbons, combustible materials, metals, oxidizing materials, halogens, metal carbide, bases, acids, amines.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

Methyl alcohol (67-56-1)

ACGIH: 200 ppm TWA
250 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA Final: 200 ppm TWA; 260 mg/m³ TWA

OSHA Vacated: 200 ppm TWA; 260 mg/m³ TWA
250 ppm STEL; 325 mg/m³ STEL
Prevent or reduce skin absorption

NIOSH: 200 ppm TWA; 260 mg/m³ TWA
250 ppm STEL; 325 mg/m³ STEL
Potential for dermal absorption

Appropriate Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Individual Protective Measures, such as Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, gloves, and lab coat or apron.

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Eyes/Face Protection

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

Skin Protection

Where skin contact is likely, wear laminate (Ansell Edmont Barrier®, North Silver Shield®, Safety 4 4h®) or equivalent protective gloves; use of natural rubber (latex), polyvinyl chloride (PVC), neoprene or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Respiratory Protection

Use NIOSH air-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of methanol may exceed applicable exposure limits. Otherwise, use NIOSH-certified P- or R-series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

*** Section 9 - Physical & Chemical Properties ***

Appearance/Odor :	Clear, colorless liquid, alcohol odor.	pH:	Not applicable
Boiling Point:	64.7°C (1°F)	Odor Threshold:	100 ppm
Solubility (H2O):	Soluble	Melting Point:	Not available.
Density:	Not available	Specific Gravity:	0.99 (water = 1)
Evaporation Rate:	4.6 (butylacetate = 1)	Octanol/H2O Coeff.:	Not available
LFL:	6% (methanol)	Auto Ignition Temperature:	464°C (921°F)
UFL:	36% (methanol)	Flash Point:	11°C (52°F)
		Viscosity:	Not available
Vapor Pressure:	97.25 mmHg @ 20°C	Vapor Density:	Not available.

Other Property Information

No information is available.

*** Section 10 - Stability & Reactivity ***

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Will not polymerize under normal temperature and pressure conditions.

Conditions To Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Halocarbons, combustible materials, metals, oxidizing materials, halogens, metal carbide, bases, acids, amines.

Hazardous Decomposition Products

Decomposition products include carbon dioxide, carbon monoxide, and unidentified organic compounds.

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*** Section 11 - Toxicological Information ***

Toxicity Data and Information

Component Analysis - LD50/LC50

Methyl alcohol (67-56-1)

Inhalation LC50 Rat 22500 ppm 8 h; Oral LD50 Rat 6200 mg/kg

Information on Likely Routes of Exposure

Inhalation

May cause irritation, nausea, loss of appetite, headache, drowsiness, dizziness, disorientation, tremors, lung damage (from aspiration), confusion, convulsions, and coma.

Ingestion

May cause headache, drowsiness, dizziness, loss of coordination, and blindness.

Skin Contact

May cause skin irritation.

Eye Contact

May cause eye irritation. Prolonged or repeated exposure may cause eye damage.

Immediate Effects

Central nervous system damage, eye damage, blindness, systemic toxicity damage.

Delayed Effects

Reproductive effects, central nervous system damage, eye damage, blindness.

Irritation/Corrosivity

May cause irritation.

Respiratory Sensitization

No information available for the product.

Skin Sensitization

No information available for the product.

Carcinogenicity

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Germ Cell Mutagenicity

No information available for the product.

Teratogenicity

No information available for the product.

Reproductive Effects

Available data characterizes this substance as a reproductive hazard.

Specific Target Organ Effects - Single Exposure

Central nervous system, retina, and systemic toxicity

Specific Target Organ Effects - Repeated Exposure

Central nervous system and retina

Aspiration Hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), cardiovascular, liver, kidney, central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Other Toxicological Information

No additional information is available.

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*** Section 12 - Ecological Information ***

Ecotoxicity

Component Analysis - Ecotoxicity - Aquatic Toxicity

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

Persistence and Degradability

No information available for the product.

Bioaccumulation Potential

No information available for the product.

Mobility in Soil

No information available for the product.

Other Adverse Effects

No additional information is available.

*** Section 13 - Disposal Considerations ***

Disposal Methods

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

If discarded, this product is considered a RCRA ignitable waste, D001. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product. Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Thermo Fluids regarding proper recycling or disposal.

*** Section 14 - Transport Information ***

Emergency Response Guide Number

128 Reference *North American Emergency Response Guidebook*

Transportation Regulations

DOT Shipping Name: Methanol

UN/NA #: UN1230 Hazard Class: 3 Packing Group: II

Required Label(s): 3

TDG Shipping Name: Methanol

UN/NA #: UN1230 Hazard Class: 3 Packing Group: II

Required Label(s): 3

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*** Section 15 - Regulatory Information ***

Federal Regulations

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA 311/312 Hazardous Categories

Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactive: No

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Methyl alcohol (67-56-1)

1.0 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Methyl alcohol (67-56-1)

5000 lb final RQ; 2270 kg final RQ

TSCA Inventory

Component Analysis

Component	CAS #	TSCA
Methyl alcohol	67-56-1	Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product can expose you to chemicals including Methyl alcohol which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.gov.

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Methyl alcohol	67-56-1	DSL

Canadian WHMIS Information

B3, D2A, D2B

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Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Methyl alcohol (67-56-1) 1 %

* * * Section 16 - Other Information * * *

Revision Information

Sections 1 and 16.

Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EPA - Environmental Protection Agency; F - Fahrenheit; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; WHMIS - Workplace Hazardous Materials Information System (Canada).

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Thermo Fluids assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

End of Sheet 820202