



Safety Data Sheet

Material Name: Flo-Perm Plumbing AF - Ethanol/PG

SDS ID: 87016

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Flo-Perm Plumbing AF - Ethanol/PG

Product Code

FPN91X50XX

Synonyms

None available.

Product Use

Winterizing boats and recreational vehicles. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Restrictions on Use

None known.

MANUFACTURER

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Issue Date

April 10, 2018

Supersedes Issue Date

May 21, 2017

Original Issue Date

May 21, 2017

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with Schedule 1 of Canada's Hazardous Products Regulations (HPR) (SOR/2015-17) and paragraph (d) of 29 CFR 1910.1200 in the United States

Flammable Liquids - Category 3

Serious Eye Damage/Eye Irritation - Category 2B

GHS Label Elements

Symbol(s)



Signal Word

Warning

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Hazard Statement(s)

Flammable liquid and vapor.
Causes eye irritation.

Precautionary Statement(s)

Prevention

Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges. Use non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Response

In case of fire: Use appropriate media to extinguish. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Repeated exposure may cause skin dryness or cracking.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64-17-5	Ethyl alcohol	>20-<25
57-55-6	1,2-Propanediol	>3-<5
3734-33-6	Bitrex	<0.1

Section 4 - FIRST AID MEASURES

Inhalation

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

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Rinse mouth.

Most Important Symptoms/Effects

Acute

Causes eye irritation.

Delayed

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Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Flammable liquid and vapor. Product may be sensitive to static discharge, which could result in fire or explosion. Vapors may form explosive mixture with air. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. 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 monoxide, carbon dioxide, formaldehyde.

Fire Fighting Measures

Keep storage containers cool with water spray. Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Do not scatter spilled material with high-pressure water streams. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Dike for later disposal.

Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

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 Cleaning Up

Remove all ignition sources. Do not touch or walk through spilled product. 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. Contain spill away from surface water and sewers. Dike far ahead of liquid spill for collection and later disposal.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. 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 in a well ventilated area. Do not eat, drink, or smoke when using this product. Avoid contact with eyes, skin and clothing, shoes. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

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Store in a well-ventilated place. Keep cool.

Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Do not pressurize, cut, weld, braze, solder, drill, or grind containers.

Incompatible Materials

Avoid contact with combustible materials, oxidizing materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION
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Component Exposure Limits

Ethyl alcohol	64-17-5
Alberta; New Brunswick; Quebec	1000 ppm TWA ; 1880 mg/m3 TWA
British Columbia; Nova Scotia; Ontario; Prince Edward Island	1000 ppm STEL
Northwest Territories; Nunavut; Saskatchewan	1000 ppm TWA; 1250 ppm STEL
Yukon	1000 ppm TWA ; 1900 mg/m3 TWA; 1000 ppm STEL ; 1900 mg/m3 STEL
ACGIH:	1000 ppm STEL
1,2-Propanediol	57-55-6
Ontario	10 mg/m3 TWA (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present) aerosol only ; 50 ppm TWA aerosol and vapor ; 155 mg/m3 TWA aerosol and vapor

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

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 Protection Measures, such as Personal Protective Equipment

Eye/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.

Respiratory Protection

A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Glove Recommendations

Where skin contact is likely, wear gloves impervious to product; use of natural rubber (latex) 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, coveralls, long sleeve shirts, or other protective clothing.

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Protective Materials

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.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pink liquid	Physical State	Liquid
Odor	Alcohol	Color	Pink
Odor Threshold	Not available	pH	6 - 8
Melting Point	Not available	Boiling Point	>70 °C
Boiling Point Range	Not available	Freezing point	-9 °C
Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	>36 °C
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	complete	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	0.96 - 0.98
Physical Form	liquid	Molecular Weight	Not available
OSHA Flammability Class	Flammable		

Section 10 - STABILITY AND 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, sparks or flame and incompatible materials.

Incompatible Materials

Avoid contact with combustible materials, oxidizing materials.

Hazardous decomposition products

Burning may produce carbon monoxide, carbon dioxide, formaldehyde.

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Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause nausea, headache, disorientation, loss of coordination.

Skin Contact

Repeated exposure may cause skin dryness or cracking.

Eye Contact

Causes eye irritation.

Ingestion

May cause irritation, nausea, vomiting.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Ethyl alcohol (64-17-5)

Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

1,2-Propanediol (57-55-6)

Oral LD50 Rat 20 g/kg; Dermal LD50 Rabbit 20800 mg/kg

Bitrex (3734-33-6)

Oral LD50 Rat 584 mg/kg

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Inhalation - Vapor	> 20 mg/L
Oral	> 2000 mg/kg

Immediate Effects

Causes eye irritation.

Delayed Effects

Repeated exposure may cause skin dryness or cracking.

Irritation/Corrosivity Data

Causes eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

Ethyl alcohol	64-17-5
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 100E [2012] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))
DFG:	Category 5 (low carcinogenic potency)
OSHA:	Present

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Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Ethyl alcohol	64-17-5
Fish:	LC50 96 h Oncorhynchus mykiss 12 - 16 mL/L [static]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Pimephales promelas 13400 - 15100 mg/L [flow-through]
Invertebrate:	LC50 48 h Daphnia magna 9268 - 14221 mg/L IUCLID ; EC50 48 h Daphnia magna 2 mg/L [Static] EPA
1,2-Propanediol	57-55-6
Fish:	LC50 96 h Oncorhynchus mykiss 51600 mg/L [static]; LC50 96 h Oncorhynchus mykiss 41 - 47 mL/L [static]; LC50 96 h Pimephales promelas 51400 mg/L [static]; LC50 96 h Pimephales promelas 710 mg/L
Algae:	EC50 96 h Pseudokirchneriella subcapitata 19000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L [Static] EPA

Invertebrate Toxicity

No additional information is available.

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. Contact Vulsay regarding proper recycling or disposal.

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Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: ETHANOL , Solution

Hazard Class: 3

UN/NA #: UN1170

Packing Group: III

Required Label(s): 3

IATA Information:

Shipping Name: ETHANOL , Solution

Hazard Class: 3

UN#: UN1170

Packing Group: III

Required Label(s): 3

IMDG Information:

Shipping Name: ETHANOL , Solution

Hazard Class: 3

UN#: UN1170

Packing Group: III

Required Label(s): 3

ICAO Information:

Shipping Name: ETHANOL , Solution

Hazard Class: 3

UN#: UN1170

Packing Group: III

Required Label(s): 3

TDG Information:

Shipping Name: ETHANOL , Solution

Hazard Class: 3

UN#: UN1170

Packing Group: III

Required Label(s): 3

International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

Canada Regulations

CEPA - Priority Substances List

None of this product's components are on the list.

Ozone Depleting Substances

None of this product's components are on the list.

Council of Ministers of the Environment - Soil Quality Guidelines

None of this product's components are on the list.

Council of Ministers of the Environment - Water Quality Guidelines

None of this product's components are on the list.

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U.S. Federal Regulations

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories

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

Component Analysis - Inventory

Ethyl alcohol (64-17-5); 1,2-Propanediol (57-55-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Bitrex (3734-33-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

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

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK -

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Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

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