

## SAFETY DATA SHEET

## SECTION 1. IDENTIFICATION

## Product identifier used on the label

: **Marine Ethanol/Gas Formula**

Product Code(s) : 00162, 90162, 00169P, 00171

## Recommended use of the chemical and restrictions on use

: Fuel system treatment. No restrictions on use known.

## Chemical family

: Mixture.

## Name, address, and telephone number of the manufacturer:

## FPF Chemical Company, Inc.

117 West Tupper Street

Buffalo, NY, USA

14201

Manufacturer's Telephone # : 1-800-735-3773

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

## Name, address, and telephone number of the supplier:

Refer to manufacturer

## SECTION 2. HAZARDS IDENTIFICATION

## Classification of the chemical

Amber liquid. Petroleum odor.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

## Classification

Flammable Liquid - Category 4

Acute toxicity, oral - Category 4

Acute Toxicity, dermal - Category 4

Acute Toxicity, inhalation - Category 4 (vapor)

Skin Irritation - Category 2

Eye damage/irritation -Category 2A

Aspiration Toxicity - Category 1

Reproductive Toxicity-Category 1

Carcinogenicity - Category 2

Specific Target Organ Toxicity, Single Exposure - Category 1 (blood)

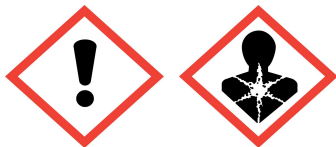
Specific Target Organ Toxicity, Single Exposure - Category 3 narcotic effects

Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Specific Target organ toxicity, repeated exposure- Category 1

## Label elements

## Hazard pictogram(s)



## Signal Word

DANGER!

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### Hazard statement(s)

Combustible liquid.  
 Harmful if swallowed.  
 Harmful in contact with skin.  
 Harmful if inhaled.  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May be fatal if swallowed and enters airways.  
 Suspected of damaging the unborn child.  
 Suspected of causing cancer.  
 Causes damage to organs if swallowed.  
 May cause drowsiness and dizziness.  
 May cause respiratory irritation.  
 Causes damage to organs through prolonged or repeated exposure.

### Precautionary statement(s)

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Keep away from flames and hot surfaces. - No smoking.  
 Do not breathe mist or vapor.  
 Use only outdoors or in a well-ventilated area.  
 Do not eat, drink or smoke when using this product.  
 Wear protective gloves/clothing and eye/face protection.  
 Wash hands and face thoroughly after handling.

IF exposed or concerned: Get medical attention/advice.  
 Get medical advice/attention if you feel unwell.  
 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Take off contaminated clothing and wash before re-use. If skin irritation occurs, get medical advice/attention.  
 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.  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Rinse mouth.  
 In case of fire: Use water fog, dry chemical, CO<sub>2</sub> or 'alcohol' foam to extinguish.

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

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

### Other hazards

No OSHA defined hazard classes.

Other hazards which do not result in classification: Burning produces obnoxious and toxic fumes. May be sensitive to static discharge. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Environmental precautions: Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
<b>Light aromatic solvent naphtha</b>	Aromatic solvent naphtha Solvent Naphtha (Petroleum) Light Aromatic	64742-95-6	<b>60.0 - 80.0</b>
<b>Ethanol</b>	Ethyl alcohol Ethyl hydrate	64-17-5	<b>10.0 - 30.0</b>
<b>2-Butoxy ethanol</b>	Ethylene Glycol Monobutyl Ether EGBE	111-76-2	<b>7.0 - 13.0</b>
<b>Heavy aromatic solvent naphtha</b>	Aromatic solvent naphtha Heavy Aromatic Naphtha	64742-94-5	<b>7.0 - 13.0</b>
<b>Manganese, tricarbonyl methylcyclopentadienyl</b>	MMT Methylcyclopentadienyl-mangane se tricarbonyl	12108-13-3	<b>0.5 - 1.5</b>

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<b>Naphthalene</b>	Moth balls Moth flakes Tar camphor	91-20-3	<b>0.5 - 1.5</b>
<b>1,2,4-Trimethylbenzene</b>	Pseudocumene	95-63-6	<b>0.1 - 1.0</b>
<b>1,3,5-Trimethyl benzene</b>	Trimethylbenzol Mesitylene	108-67-8	<b>0.1 - 1.0</b>
<b>Xylene (mixed isomers)</b>	Dimethylbenzene Methyltoluene Xylol	1330-20-7	<b>&lt;0.1</b>
<b>Cumene</b>	Isopropyl benzene Cumol 2-Phenyl propane	98-82-8	<b>&lt;0.1</b>

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

### SECTION 4. FIRST-AID MEASURES

#### Description of first aid measures

- Ingestion* : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Aspiration hazard Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.
- Inhalation* : If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only.
- Skin contact* : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs, get medical advice/attention.
- Eye contact* : 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.

#### Most important symptoms and effects, both acute and delayed

- : IF exposed or concerned: Get medical attention/advice.  
 Harmful if inhaled. Symptoms may include coughing, choking and wheezing.  
 Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Symptoms may include severe abdominal pain, vomiting, burns and bleeding.  
 Harmful in contact with skin. May be absorbed through the skin, producing symptoms similar to ingestion or inhalation.  
 Causes skin irritation. Symptoms include redness, swelling and sloughing of skin cells (flaking).  
 Causes serious eye irritation. Symptoms may include tearing, redness and discomfort. Causes damage to organs if swallowed. Contains material which may cause adverse blood system effects.  
 May be fatal if swallowed and enters airways. Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing. Symptoms include coughing, shortness of breath and wheezing.  
 Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.  
 Suspected of damaging the unborn child. Symptoms in offspring may include reduced fetal weight, behavioral effects, delayed skeletal formation and hearing loss.  
 May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.  
 May cause drowsiness and dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.  
 May cause damage to organs through prolonged or repeated exposure.

#### Indication of any immediate medical attention and special treatment needed

- : Immediate medical attention is required. Provide general supportive measures and treat symptomatically. Show this safety data sheet to the doctor in attendance.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing media

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### *Suitable extinguishing media*

: Dry chemical, foam, carbon dioxide and water fog.

### *Unsuitable extinguishing media*

: Do not use a solid water stream as it may scatter and spread fire.

### **Special hazards arising from the substance or mixture / Conditions of flammability**

: Combustible liquid Keep away from flames and hot surfaces. After prolonged storage, may release explosive peroxides in the presence of air. Rate of peroxide formation is not known. This product will accumulate static charge by flow, splashing or agitation. Vapours are heavier than air and collect in confined and low-lying areas. Vapors may travel considerable distance to a source of ignition and flash back. Product may float, and be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

### **Flammability classification (OSHA 29 CFR 1910.106)**

: Flammable Liquid - Category 4

### **Hazardous combustion products**

: Carbon monoxide, carbon dioxide, reactive hydrocarbons, aldehydes and other irritant gases, which may include toxic constituents.

### **Special protective equipment and precautions for firefighters**

#### *Protective equipment for fire-fighters*

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

#### *Special fire-fighting procedures*

: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Dike for water control.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

: Evacuate personnel to safe areas. Keep all other personnel upwind and away from the spill/release. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

### **Methods and material for containment and cleaning up**

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Do not use combustible absorbents, such as sawdust. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

### **Special spill response procedures**

: In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).  
US CERCLA Reportable quantity (RQ):  
Naphthalene (100 lbs / 45.4 kg);  
Methylcyclopenta dienyl-manganese tricarbonyl (100 lbs / 45.4 kg);  
Xylene (100 lbs / 45.4 kg);  
Cumene (5000 lbs / 2270 kg).

## SECTION 7. HANDLING AND STORAGE

### **Precautions for safe handling**

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- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.  
Use only outdoors or in a well-ventilated area. Keep away from flames and hot surfaces. - No smoking. Wear protective gloves/clothing and eye/face protection. Do not breathe mist or vapor. Do not eat, drink or smoke when using this product. Do not ingest. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials.
- Conditions for safe storage** : Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up. Store away from incompatibles and out of direct sunlight. After prolonged storage, may release explosive peroxides in the presence of air. Direct sunlight or heat may accelerate the release of peroxides. Rate of peroxide formation is not known. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents; Acids Hydrogen peroxide ; Bases.

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>					
	<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
		<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Light aromatic solvent naphtha	N/Av	N/Av	N/Av	N/Av	
Ethanol	N/Av	1000 ppm	1000ppm (1900mg/m <sup>3</sup> )	N/Av	
2-Butoxy ethanol	20 ppm	N/Av	50 ppm (skin)	N/Av	
Heavy aromatic solvent naphtha	N/Av	N/Av	500 ppm (as petroleum distillates, naphtha)	N/Av	
Manganese, tricarbonyl methylcyclopentadienyl	0.2 mg/m <sup>3</sup> (as Mn)	N/Av	0.2mg/m <sup>3</sup> (as Mn) (final rule)	N/Av	
Naphthalene	10 ppm (skin)	N/Av	10 ppm ; 50 mg/m <sup>3</sup>	15ppm; 75mg/m <sup>3</sup>	
1,2,4-Trimethylbenzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av	
1,3,5-Trimethyl benzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av	
Xylene (mixed isomers)	100 ppm	150 ppm	100 ppm (435 mg/m <sup>3</sup> )	N/Av	
Cumeme	50 ppm	N/Av	50 ppm ; 245 mg/m <sup>3</sup> (Skin)	N/Av	

#### Exposure controls

##### Ventilation and engineering measures

- : Use only outdoors or in a well-ventilated area. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use non-sparking equipment. In case of insufficient ventilation wear suitable respiratory equipment.

##### Respiratory protection

- : If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable approved respiratory protection. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

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- Skin protection** : Wear protective gloves. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye / face protection** : Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary.
- Other protective equipment** : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home. Handle in accordance with good industrial hygiene and safety practice.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Amber liquid.
- Odour** : Odor of ether and petroleum distillates.
- Odour threshold** : N/Av
- pH** : N/Av
- Melting/Freezing point** : N/Av
- Initial boiling point and boiling range** : N/Av
- Flash point** : >61.1°C / >142°F
- Flashpoint (Method)** : Tag closed cup
- Evaporation rate (BuAe = 1)** : N/Av
- Flammability (solid, gas)** : N/Av
- Lower flammable limit (% by vol.)** : N/Av
- Upper flammable limit (% by vol.)** : N/Av
- Oxidizing properties** : None known.
- Explosive properties** : N/Av
- Vapour pressure** : N/Av
- Vapour density** : >1
- Relative density / Specific gravity** : 0.84
- Solubility in water** : 48%
- Other solubility(ies)** : N/Av
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av
- Auto-ignition temperature** : N/Av
- Decomposition temperature** : N/Av
- Viscosity** : N/Av
- Volatiles (% by weight)** : N/Av
- Volatile organic Compounds (VOC's)** : N/Av
- Absolute pressure of container** : N/Av
- Flame projection length** : N/Av
- Other physical/chemical comments** :

### SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Not normally reactive.
- Chemical stability** : Stable under normal conditions.

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### Possibility of hazardous reactions

- : Hazardous polymerization will not occur. Keep away from flames and hot surfaces. May be sensitive to static discharge. May form explosive peroxides during prolonged exposure to air and heat. Rate of peroxide formation is not known.

### Conditions to avoid

- : Avoid heat and open flame. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.

### Incompatible materials

- : Strong oxidizing agents ;Acids ;Hydrogen peroxide ;Bases

### Hazardous decomposition products

- : None reported by the manufacturer. Refer also to hazardous combustion products, Section 5.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

**Routes of entry inhalation** : YES

**Routes of entry skin & eye** : YES

**Routes of entry Ingestion** : YES

**Routes of exposure skin absorption**

- : YES

### Potential Health Effects:

#### Signs and symptoms of short-term (acute) exposure

##### *Sign and symptoms Inhalation*

- : Harmful if inhaled. Inhalation may cause respiratory irritation and central nervous system depression. May cause coughing and breathing difficulties. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

##### *Sign and symptoms ingestion*

- : Harmful if swallowed. Ingestion may cause symptoms similar to inhalation. Symptoms may include severe abdominal pain, vomiting, burns and bleeding. Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea. Causes damage to organs if swallowed. Contains material which may cause adverse blood system effects. Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing. Symptoms include coughing, shortness of breath and wheezing.

##### *Sign and symptoms skin*

- : Harmful in contact with skin. May be absorbed through the skin, producing symptoms similar to ingestion or inhalation. Causes skin irritation. Symptoms include: Dryness, itching, cracking, burning, redness and swelling.

##### *Sign and symptoms eyes*

- : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

#### Potential Chronic Health Effects

- : May cause damage to the blood system, the liver and the kidneys through prolonged or repeated exposure. Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Chronic overexposure to 2-butoxyethanol may cause liver, kidney and blood damage.

#### Mutagenicity

- : Not expected to be mutagenic in humans.

#### Carcinogenicity

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification Carcinogenicity- Category 2 Suspected of causing cancer.

Contains Naphthalene. Naphthalene is classified as carcinogenic by IARC (Group 2B) and NTP (Group 2 - Reasonably anticipated).

Contains Cumene. Cumene is classified as possibly carcinogenic by IARC (Group 2B).

#### Reproductive effects & Teratogenicity

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: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification :  
Reproductive Toxicity-Category 1  
Suspected of damaging the unborn child.

Contains Xylene (mixed isomers) Xylene may cause fetotoxic effects (e.g. reduced fetal weight, delayed ossification, behavioral effects) at doses which are not maternally toxic, based on animal data.

**Sensitization to material** : Not expected to be a skin sensitizer.  
Not expected to be a respiratory sensitizer.

**Specific target organ effects** : Eyes, skin, respiratory system, digestive system, central nervous system, blood system.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification  
Specific target organ toxicity, single exposure Category 1 Causes damage to organs. Excessive overexposure could cause blood system effects (anemia). Contains Naphthalene

Specific target organ toxicity, single exposure Category 3 May cause drowsiness and dizziness. May cause respiratory irritation.

Specific target organ toxicity, repeated exposure Category 1 Causes damage to organs through prolonged or repeated exposure. May cause damage to lungs, liver, and kidneys through prolonged or repeated exposure if inhaled. Contains Methylcyclopenta dienyl-manganese tricarbonyl

**Medical conditions aggravated by overexposure**

: Pre-existing skin, eye, respiratory and central nervous system disorders.

**Synergistic materials** : None reported by the manufacturer.

**Toxicological data** : The calculated ATE values for this mixture are:

ATE oral = 453mg/kg  
ATE dermal = 1438mg/kg  
ATE inhalation (vapours) = 16.8mg/L/4H  
ATE inhalation (mists) = 7.3mg/L/4H

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC<sub>50</sub>(4hr)</u> <u>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Light aromatic solvent naphtha	>17.7mg/L/4H (vapour)	8400 mg/kg	>3160 mg/kg
Ethanol	> 32 380 ppm (61 mg/L) (vapour)	7060 mg/kg	> 15 800 mg/kg
2-Butoxy ethanol	450 ppm (2.175 mg/L)	530 mg/kg	400 - 500 mg/kg
Heavy aromatic solvent naphtha	> 17.1 mg/L/4 hours	> 6000 mg/kg	> 3160 mg/kg
Manganese, tricarbonyl methylcyclopentadienyl	8.5 ppm (0.076mg/L (mist) )	22.9 mg/kg	140 mg/kg
Naphthalene	No information available.	490 mg/kg	>20,000 mg/kg
1,2,4-Trimethylbenzene	18 mg/L	5000 mg/kg	> 3160 mg/kg
1,3,5-Trimethyl benzene	24 mg/L	23 000 mg/kg	>3160mg/kg
Xylene (mixed isomers)	6350 ppm (27.6 mg/L) (vapours)	3253 mg/kg	12 180 mg/kg
Cumeme	8000 ppm; 39 mg/L	2260 mg/kg	10 627 mg/kg



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**Other important toxicological hazards**

: None known or reported by the manufacturer.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** : No data is available on the product itself.

See the following tables for individual ingredient ecotoxicity data.

**Ecotoxicity data:**

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Light aromatic solvent naphtha	64742-95-6	9.22 mg/L (Rainbow trout)	N/Av	None.
Ethanol	64-17-5	> 100 mg/L (Fathead minnow)	N/Av	None.
2-Butoxy ethanol	111-76-2	1490 mg/L (Bluegill)	>100mg/L (Zebra fish)	None.
Heavy aromatic solvent naphtha	64742-94-5	3.6 mg/L (Rainbow trout)	N/Av	None.
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	0.21mg/L (common carp)	N/Av	None.
Naphthalene	91-20-3	0.96 mg/L (pink salmon)	0.12mg/L (40 days) (pink salmon)	None.
1,2,4-Trimethylbenzene	95-63-6	7.72 mg/L (Fathead minnow)	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	12.52 mg/L (Goldfish)	N/Av	None.
Xylene (mixed isomers)	1330-20-7	8.2 mg/L (Rainbow trout)	N/Av	None.
Cumeme	98-82-8	4.5mg/L (Rainbow trout)	0.38mg/L QSAR	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Light aromatic solvent naphtha	64742-95-6	6.16 mg/L (Daphnia magna)	N/Av	None.
Ethanol	64-17-5	5012 mg/L (Daphnia magna)	>100mg/L	None.
2-Butoxy ethanol	111-76-2	835mg/L (Daphnia magna)	100mg/L (Daphnia magna)	None.
Heavy aromatic solvent naphtha	64742-94-5	1.1 mg/L (Water flea)	N/Av	None.
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	0.83mg/L (Daphnia magna)	N/Av	None.
Naphthalene	91-20-3	3.4 mg/L/ Water flea	0.6mg/L	None.
1,2,4-Trimethylbenzene	95-63-6	3.6 mg/L (Daphnia magna)	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	6 mg/L (Daphnia magna)	0.4mg/L	None.
Xylene (mixed isomers)	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	N/Av	None.
Cumeme	98-82-8	2.14 mg/L (Daphnia magna)	0.35mg/L	None.

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Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Light aromatic solvent naphtha	64742-95-6	N/Av	N/Av	N/Av
Ethanol	64-17-5	1000 mg/L/96hr (Green algae)	N/Av	None.
2-Butoxy ethanol	111-76-2	911mg/L/72hr	286mg/L/72hr	None.
Heavy aromatic solvent naphtha	64742-94-5	7.2 mg/L/72 hours (Green algae)	0.22 mg/L/72 hours (Green algae)	None.
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	1.7mg/L/48hr (Pseudokirchneriella subcapitata)	N/Av	None.
Naphthalene	91-20-3	0.4mg/L/72hr (Marine diatom)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	2.356mg/L/96hr	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	3.191mg/L QSAR	N/Av	None.
Xylene (mixed isomers)	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	N/Av	None.
Cumeme	98-82-8	1.29mg/L/72hr (Green algae)	0.73mg/L	None.

**Persistence and degradability**

: No data is available on the product itself. The following ingredients are considered to be readily biodegradable: Ethanol; Xylene; Cumene; Ethylene glycol monobutyl ether.

**Bioaccumulation potential**

: No data is available on the product itself. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Light aromatic solvent naphtha (CAS 64742-95-6)	2.1 - 6(calculated)	10 - 2500
Ethanol (CAS 64-17-5)	- 0.31	No information available.
2-Butoxy ethanol (CAS 111-76-2)	0.81 at 25 °C	0.97
Heavy aromatic solvent naphtha (CAS 64742-94-5)	2.9 - 6.1	No information available.
Manganese, tricarbonyl methylcyclopentadienyl (CAS 12108-13-3)	3.4 - 3.7	200 fish
Naphthalene (CAS 91-20-3)	3.7	30 - 430 species: fish
1,2,4-Trimethylbenzene (CAS 95-63-6)	3.78	31 - 275
1,3,5-Trimethyl benzene (CAS 108-67-8)	3.6 - 3.93	23 - 328
Xylene (mixed isomers) (CAS 1330-20-7)	3.12 - 3.2	50 - 58
Cumeme (CAS 98-82-8)	3.55 at 23 °C	224

**Mobility in soil**

: No data is available on the product itself.

**Other Adverse Environmental effects**

: The ecological characteristics of this product have not been fully investigated. Contains material that may be harmful in the environment. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.



**SECTION 13. DISPOSAL CONSIDERATIONS****Handling for Disposal**

: Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

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- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

### SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	NA1993	Combustible liquid, n.o.s. (Aromatic naphtha; Ethanol)	Combustible.	III	
<b>49CFR/DOT Additional information</b>	Not regulated for road or rail shipment if packaged in non-bulk containers (450 Litres or less each). The 'label' appearing here is the placard to be used for bulk shipments. This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				
TDG	None	Not regulated.	not regulated	none	
<b>TDG Additional information</b>	This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				

**Special precautions for user** : Appropriate advice on safety must accompany the package. Keep away from flames and hot surfaces. - No smoking.

**Environmental hazards** : This product meets the criteria for an environmentally hazardous material according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

: Not available.

### SECTION 15 - REGULATORY INFORMATION

**US Federal Information:**

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Light aromatic solvent naphtha	64742-95-6	Yes	N/Ap	N/Ap	No	N/Ap
Ethanol	64-17-5	Yes	None.	None.	No	N/Ap
2-Butoxy ethanol	111-76-2	Yes	N/Ap	N/Av	No	N/Ap
Heavy aromatic solvent naphtha	64742-94-5	Yes	N/Ap	N/Ap	No	N/Ap
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	Yes	100 lb	100 lb TPQ	Yes	1%
Naphthalene	91-20-3	Yes	100 lb/ 45.4 kg	N/Av	Yes	0.1%
1,2,4-Trimethylbenzene	95-63-6	Yes	N/Ap	N/Ap	Yes	1%
1,3,5-Trimethyl benzene	108-67-8	Yes	N/Ap	N/Av	No	N/Ap
Xylene (mixed isomers)	1330-20-7	Yes	100 lb/ 45.4 kg	None.	Yes	1%
Cumeme	98-82-8	Yes	5000 lb/ 2270 kg	N/Ap	Yes	1%

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SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Physical hazards (Flammable) Health hazards (Acute toxicity ;Skin irritation ;Eye irritation ;Aspiration hazard ;Reproductive toxicity ;Carcinogenicity ;Specific target organ toxicity, single exposure ;Specific target organ toxicity, repeated exposure). Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

### US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Light aromatic solvent naphtha	64742-95-6	No	Not listed	No	No	No	No	No	No
Ethanol	64-17-5	Yes	Cancer (in alcoholic beverages) Developmental (in alcoholic beverages)	Yes	Yes	Yes	Yes	Yes	Yes
2-Butoxy ethanol	111-76-2	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
Heavy aromatic solvent naphtha	64742-94-5	No	Not listed	No	No	No	No	No	No
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	No	Not listed	No	Yes	Yes	Yes	Yes	No
Naphthalene	91-20-3	Yes	Carcinogen	Yes	Yes	Yes	Yes	Yes	Yes
1,2,4-Trimethylbenzene	95-63-6	No	Not listed	No	Yes	Yes	Yes	Yes	No
1,3,5-Trimethyl benzene	108-67-8	No	Not listed	Yes	Yes	No	No	No	No
Xylene (mixed isomers)	1330-20-7	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
Cumeme	98-82-8	Yes	Carcinogen	Yes	Yes	Yes	Yes	Yes	Yes

### Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS Classification: See Section 2.

### International Information:

Components listed below are present on the following International Inventory list:

## SAFETY DATA SHEET

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Light aromatic solvent naphtha	64742-95-6	265-199-0	Present	Present	(9)-1698	KE-31662	Present	May be used as a single component chemical under an appropriate group standard.
Ethanol	64-17-5	200-578-6	Present	Present	(2)-202	KE-13217	Present	HSR001144
2-Butoxy ethanol	111-76-2	203-905-0	Present	Present	(7)-97; (2)-407	KE-04134	Present	HSR001154
Heavy aromatic solvent naphtha	64742-94-5	265-198-5	Present	Present	(3)-7	KE-31656	Present	May be used as a single component chemical under an appropriate group standard.
Manganese, tricarbonyl methylcyclopentadienyl	12108-13-3	235-166-5	Present	Present	(3)-2558	KE-34053	Present	May be used as a single component chemical under an appropriate group standard.
Naphthalene	91-20-3	202-049-5	Present	Present	(4)-311	KE-25545	Present	HSR001287
1,2,4-Trimethylbenzene	95-63-6	202-436-9	Present	Present	(3)-7; (3)-3427	KE-34410	Present	HSR001382
1,3,5-Trimethyl benzene	108-67-8	203-604-4	Present	Present	(3)-7; (3)-3427	KE-34411	Present	HSR001229
Xylene (mixed isomers)	1330-20-7	215-535-7	Present	Present	(3)-60; (3)-3	KE-35427	Present	HSR000983
Cumene	98-82-8	202-704-5	Present	Present	(3)-32; (3)-22	KE-23957	Present	HSR001184

## SECTION 16. OTHER INFORMATION

## Legend

: ACGIH: American Conference of Governmental Industrial Hygienists  
 AICS: Australian Inventory of Chemical Substances  
 CAS: Chemical Abstract Services  
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CFR: Code of Federal Regulations  
 CSA: Canadian Standards Association  
 DOT: Department of Transportation  
 EC50: Effective Concentration 50%  
 EINECS: European Inventory of Existing Commercial chemical Substances  
 ENCS: Existing and New Chemical Substances  
 EPA: Environmental Protection Agency  
 HMIS: Hazardous Materials Identification System  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer  
 Inh: Inhalation  
 IMDG: International Maritime Dangerous Goods  
 KECI: Korean Existing Chemicals Inventory  
 KECL: Korean Existing Chemicals List  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 MA: Massachusetts  
 MN: Minnesota  
 MSHA: Mine Safety and Health Administration  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NFPA: National Fire Protection Association  
 NIOSH: National Institute of Occupational Safety and Health  
 NTP: National Toxicology Program  
 NJ: New Jersey

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NOEC: No observable effect concentration  
 NTP: National Toxicology Program  
 OECD: Organisation for Economic Co-operation and Development  
 OSHA: Occupational Safety and Health Administration  
 PA: Pennsylvania  
 PEL: Permissible exposure limit  
 PICCS: Philippine Inventory of Chemicals and Chemical Substances  
 RCRA: Resource Conservation and Recovery Act  
 RI: Rhode Island  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short Term Exposure Limit  
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
 TLV: Threshold Limit Values  
 TPQ: Threshold Planning Quantity  
 TSCA: Toxic Substance Control Act  
 TWA: Time Weighted Average  
 WHMIS: Workplace Hazardous Materials Identification System

### References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2018.  
 2. International Agency for Research on Cancer Monographs, searched 2018.  
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2018 (Chempendium, HSDB and RTECs).  
 4. Material Safety Data Sheets from manufacturer.  
 5. US EPA Title III List of Lists - March 2015 version.  
 6. California Proposition 65 List - November 23, 2018 version.  
 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.

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### Revision Information

: (M)SDS sections updated 2. HAZARDS IDENTIFICATION 4. FIRST AID MEASURES 11. TOXICOLOGICAL INFORMATION 15. REGULATORY INFORMATION 16. Other information

### Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><b><u>Prepared for:</u></b>          FPPF Chemical Company, Inc.          117 West Tupper Street          Buffalo, NY, USA 14201          Telephone: 1-800-735-3773          Please direct all enquiries to FPPF Chemical Company</p>	
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