SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Hot 4-in-1 Heating Oil Treatment**

Product Code(s) : US Product codes: 00161, 90161, 00164, 90164, 00163
Canada Product Codes: 00221, 90221

Recommended use of the chemical and restrictions on use

: Fuel oil treatment. No restrictions on use known.

Chemical family : Mixture.

Name, address, and telephone number of the manufacturer:

FPPF Chemical Company, Inc.
117 West Tupper Street
Buffalo, NY, USA
14201
Manufacturer's Telephone # : 1-800-735-3773

Name, address, and telephone number of the supplier:

Refer to manufacturer

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

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Amber liquid. Mineral oil 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 3
Acute Toxicity, inhalation - Category 3 (vapor)
Skin Irritation - Category 2
Eye Damage/Irritation - Category 2B
Aspiration Toxicity - Category 1
Reproductive Toxicity - Category 1B Developmental
Carcinogenicity- Category 2
Specific Target Organ Toxicity, Single Exposure - Category 3 narcotic effects
Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

SAFETY DATA SHEET

Hazard statement(s)

Combustible liquid and vapor.
Harmful if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May be fatal if swallowed and enters airways.
Suspected of causing cancer.
Suspected of damaging the unborn child.

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.
Avoid breathing vapors or mists.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing and eye/face protection.
Wash hands and face thoroughly after handling.

In case of fire, use water fog, dry chemical, CO2 or 'alcohol' foam.
IF exposed or concerned: Get medical attention/advice.
Call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before re-use.
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.

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: May be sensitive to static discharge. Burning produces obnoxious and toxic fumes. 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

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
2-Butoxy ethanol	Ethylene Glycol Monobutyl Ether EB	111-76-2	**30.0 - 60.0**
Light aromatic solvent naphtha	Aromatic Naphtha Solvent naphtha (petroleum) light aromatic	64742-95-6	**15.0 - 40.0**
1,2,4-Trimethylbenzene	Pseuoducumene	95-63-6	**3.0 - 7.0**
1,3,5-Trimethyl benzene	Trimethylbenzol Mesitylene	108-67-8	**1.0 - 5.0**
Xylene (mixed isomers)	Dimethylbenzene Methyltoluene Xylol	1330-20-7	**1.0 - 5.0**

SAFETY DATA SHEET

Trimethylbenzenes	Methylxylenes (non-specific name); Trimethylbenzenes (non-specific name)	25551-13-7	**1.0 - 5.0**
Cumeme	Isopropyl benzene Cumol, 2-phenyl propane	98-82-8	**0.1 - 1.0**
oleic acid	Oleinic acid; 9-Octadecenoic acid; Elaic acid	112-80-1	**0.1 - 1.0**
Heavy aromatic solvent naphtha	Aromatic Naphtha Solvent naphtha (petroleum) heavy aromatic	64742-94-5	**0.1 - 1.0**
Ethylbenzene	Ethylbenzene Phenylethane EB	100-41-4	**0.1 - 1.0**

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. Do NOT induce vomiting. Rinse mouth. Aspiration hazard 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 CENTRE 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. If skin irritation occurs, get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse.

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 swallowed. Symptoms may include severe abdominal pain, vomiting, burns and bleeding. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Toxic in contact with skin. May be absorbed through the skin, producing symptoms similar to ingestion or inhalation.
Toxic if inhaled. Symptoms may include coughing, choking and wheezing. May cause respiratory impairment and lung damage.
May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.
May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.
Causes skin irritation. Symptoms may include redness, itching and swelling.
Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.
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.

Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Chronic overexposure to 2-butoxyethanol may cause liver, kidney and blood damage, based on animal data. Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

SAFETY DATA SHEET

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

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 and vapour. Keep away from flames and hot surfaces. - No smoking.Use only outdoors or in a well-ventilated area.
May be sensitive to static discharge. After prolonged storage, may release explosive peroxides in the presence of air. Rate of peroxide formation is not known. Vapors may travel considerable distance to a source of ignition and flash back. Vapours may be heavier than air and may collect in confined and low-lying areas. 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 oxides.Nitrogen oxides. Reactive hydrocarbons. Aldehydes. Other irritating fumes and smoke.

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. 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. Bond and ground transfer containers and equipment to avoid static accumulation. 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):
Xylene (100 lbs / 45.4 kg);
Cumene (5000 lbs / 2270 kg);
Ethylbenzene (1000 lbs / 454 kg)

SAFETY DATA SHEET

SECTION 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. 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. Wash hands thoroughly after handling. Avoid breathing mist or vapor. Do not eat, drink or smoke when using this product. Do not ingest. Avoid contact with skin, eyes and clothing. Avoid contact with incompatible materials.

Conditions for safe storage : Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up. Take measures to prevent the build up of electrostatic charge. 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; Perchloric acid; Reactive metals; Bases.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
2-Butoxy ethanol	20 ppm	N/Av	50 ppm (skin)	N/Av
Light aromatic solvent naphtha	N/Av	N/Av	N/Av	N/Av
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/m³)	N/Av
Trimethylbenzenes	25 ppm	N/Av	25 ppm (final rule limit)	N/Av
Cumeme	50 ppm	N/Av	50 ppm ; 245 mg/m³ (Skin)	N/Av
oleic acid	N/Av	N/Av	N/Av	N/Av
Heavy aromatic solvent naphtha	N/Av	N/Av	500 ppm (as petroleum distillates, naphtha)	N/Av
Ethylbenzene	20 ppm	N/Av	100 ppm ; 435 mg/m³	125ppm; 545mg/m³

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.

SAFETY DATA SHEET

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.

Skin protection : Wear protective gloves/clothing. 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

: Avoid breathing mist or vapor. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Amber liquid.

Odour : Mineral oil odor

Odour threshold : N/Av

pH : N/Av

Melting/Freezing point : N/Av

Initial boiling point and boiling range

: 113 - 116 °C / 235 - 240°F

Flash point : >60°C / >140°F

Flashpoint (Method) : Tag closed cup

Evaporation rate (BuAe = 1) : Slower than n-butyl acetate

Flammability (solid, gas) : N/Ap

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

: 0.90

Solubility in water : Slightly soluble.

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) : 87%(approximately)

Volatile organic Compounds (VOC's)

: N/Av

Absolute pressure of container

: N/Ap

Flame projection length : N/Ap

Other physical/chemical comments

: None reported by the manufacturer.

SAFETY DATA SHEET

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Hazardous polymerization will not occur. 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 : Keep away from flames and hot surfaces. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas. Take precautionary measures against static discharge. Avoid contact with incompatible materials.

Incompatible materials : Strong oxidizing agents;Acids; Perchloric acid; BasesReactive metals

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

: Toxic if inhaled. Inhalation may cause respiratory irritation and central nervous system depression. Symptoms include:Upper respiratory irritation, coughing, sneezing, staggering gait, giddiness, drowiness, slurred speech, nausea, and possible nervous system depression.

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. 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.

Sign and symptoms skin : Toxic 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

: Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Chronic overexposure to 2-butoxyethanol may cause liver, kidney and blood damage. Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Mutagenicity : Not expected to be mutagenic in humans.

SAFETY DATA SHEET

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 Cumene. Cumene is classified as possibly carcinogenic by IARC (Group 2B). Contains Ethylbenzene. Ethylbenzene is classifed as carcinogenic by IARC (Group 2B) and ACGIH (Category A3).

Reproductive effects & Teratogenicity

: 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 1B Suspected of damaging the unborn child. Developmental

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 3 May cause drowsiness and dizziness. May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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 = 1041.6mg/kg
ATE dermal =545.7mg/kg
ATE inhalation (vapours) =3.7mg/L/4H

See below for individual ingredient acute toxicity data.

SAFETY DATA SHEET

Chemical name	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
2-Butoxy ethanol	450 ppm (2.175 mg/L)	530 mg/kg	400 - 500 mg/kg
Light aromatic solvent naphtha	>17.7mg/L/4H (vapour)	8400 mg/kg	>3160 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
Trimethylbenzenes	18 - 24mg/kg (based on similar substances)	8970 mg/kg	>3160mg/kg (based on similar substances)
Cumeme	8000 ppm; 39 mg/L	2260 mg/kg	10 627 mg/kg
oleic acid	N/Av	>19200 mg/kg	>3000mg/kg guinea pig
Heavy aromatic solvent naphtha	> 17.1 mg/L/4 hours	> 6000 mg/kg	> 3160 mg/kg
Ethylbenzene	4000 ppm (17.4mg/L) (vapour)	3500 mg/kg	15,380 mg/kg

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:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
2-Butoxy ethanol	111-76-2	1490 mg/L (Lepomis macrocrhius)	>100mg/L (Zebra fish)	none
Light aromatic solvent naphtha	64742-95-6	9.22 mg/L (Rainbow trout)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	7.19 - 8.28 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.
Trimethylbenzenes	25551-13-7	7.72mg/L (Fathead minnow) (Read-across)	N/Av	None.
Cumeme	98-82-8	4.5mg/L (Rainbow trout)	0.38mg/L QSAR	None.
oleic acid	112-80-1	205 mg/L (Fathead minnow)	N/Av	None.
Heavy aromatic solvent naphtha	64742-94-5	3.6 mg/L (Rainbow trout)	N/Av	none
Ethylbenzene	100-41-4	4.2 mg/L (Rainbow trout)	1.13mg/L(30 day) QSAR (no species given)	none

SAFETY DATA SHEET

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
2-Butoxy ethanol	111-76-2	835mg/L (Daphnia magna)	100mg/L (Daphnia magna)	none
Light aromatic solvent naphtha	64742-95-6	6.16 mg/L (Daphnia magna)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	6.14 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.
Trimethylbenzenes	25551-13-7	2.7mg/L Daphnia magna (Water flea) (Read-across)	0.4mg/L (Read-across)	None.
Cumeme	98-82-8	2.14 mg/L (Daphnia magna)	0.35mg/L	None.
oleic acid	112-80-1	N/Av	N/Av	None.
Heavy aromatic solvent naphtha	64742-94-5	1.1 mg/L Water flea	N/Av	none
Ethylbenzene	100-41-4	1.81 mg/L/ Water flea	N/Av	none

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
2-Butoxy ethanol	111-76-2	911mg/L/72hr	286mg/L/72hr	none
Light aromatic solvent naphtha	64742-95-6	N/Av	N/Av	N/Av
1,2,4-Trimethylbenzene	95-63-6	N/Av	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.
Trimethylbenzenes	25551-13-7	5.7mg/L/72hr (Green algae) (Read-across)	0.38mg/L/72hr (Read-across)	None.
Cumeme	98-82-8	1.29mg/L/72hr (Green algae)	0.73mg/L	None.
oleic acid	112-80-1	N/Av	N/Av	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
Ethylbenzene	100-41-4	3.6 mg/L/96 hours (Selanastrum capricornatum)	3.4mg/L	none

Persistence and degradability : No data is available on the product itself.
The following ingredients are considered to be readily biodegradable: 2-butoxyethanol.

Bioaccumulation potential : No data is available on the product itself.

See the following data for ingredient information.

SAFETY DATA SHEET

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
2-Butoxy ethanol (CAS 111-76-2)	0.81 at 25 °C	0.97
Light aromatic solvent naphtha (CAS 64742-95-6)	2.1 - 6(calculated)	10 - 2500(calculated)
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	0.6 - 15
Trimethylbenzenes (CAS 25551-13-7)	3.63	42 - 328
Cumeme (CAS 98-82-8)	3.55 at 23 °C	224
oleic acid (CAS 112-80-1)	7.64	10(calculated)
Heavy aromatic solvent naphtha (CAS 64742-94-5)	>3 - < 6.5	No information available.
Ethylbenzene (CAS 100-41-4)	3.15	1.1 - 1.5

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.

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; Trimethylbenzene)	Combustible.	III	
49CFR/DOT Additional information	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	
TDG Additional information	This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				

Special precautions for user : Keep away from heat, sparks and open flame. - No smoking.

SAFETY DATA SHEET

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:

Ingredients	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
2-Butoxy ethanol	111-76-2	Yes	N/Ap	N/Av	No	N/Ap
Light aromatic solvent naphtha	64742-95-6	Yes	N/Ap	N/Ap	No	N/Ap
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%
Trimethylbenzenes	25551-13-7	Yes	N/Ap	N/Ap	No	N/Ap
Cumeme	98-82-8	Yes	5000 lb/ 2270 kg	N/Ap	Yes	1%
oleic acid	112-80-1	Yes	N/Ap	N/Av	No	N/Ap
Heavy aromatic solvent naphtha	64742-94-5	Yes	N/Ap	N/Av	No	N/Ap
Ethylbenzene	100-41-4	Yes	1000 lb/ 454 kg	N/Ap	Yes	0.1%

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Acute Health Hazard; Chronic Health Hazard. 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:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
2-Butoxy ethanol	111-76-2	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
Light aromatic solvent naphtha	64742-95-6	No	Not listed	No	No	No	No	No	No
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
Trimethylbenzenes	25551-13-7	No	Not listed	Yes	Yes	Yes	Yes	Yes	No
Cumeme	98-82-8	Yes	Carcinogen	Yes	Yes	Yes	Yes	Yes	Yes
oleic acid	112-80-1	No	Not listed	No	No	No	No	Yes	No
Heavy aromatic solvent naphtha	64742-94-5	No	Not listed	No	No	No	No	No	No
Ethylbenzene	100-41-4	Yes	Carcinogen:	Yes	Yes	Yes	Yes	Yes	Yes

SAFETY DATA SHEET

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:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
2-Butoxy ethanol	111-76-2	203-905-0	Present	Present	(7)-97; (2)-407	KE-04134	Present	HSR001154
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.
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
Trimethylbenzenes	25551-13-7	247-099-9	Present	Present	(3)-7; (3)-3427	KE-34408	Present	May be used as a single component chemical under an appropriate group standard.
Cumeme	98-82-8	202-704-5	Present	Present	(3)-32; (3)-22	KE-23957	Present	HSR001184
oleic acid	112-80-1	204-007-1	Present	Present	(2)-975; (2)-609	KE-26450	Present	HSR003153
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.
Ethylbenzene	100-41-4	202-849-4	Present	Present	(3)-60; (3)-28	KE-13532	Present	HSR001151

SECTION 16. OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
ATE: Acute Toxicity Estimate
AICS: Australian Inventory of Chemical Substances
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CNS: Central Nervous System
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

SAFETY DATA SHEET

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
NOEC: No observable effect concentration
NTP: National Toxicology Program
NJ: New Jersey
NOEC: No observable effect concentration
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.

Preparation Date (mm/dd/yyyy)

: 05/31/2015

Reviewed Date SDS (dd/mm/yyyy)

: 04/03/2019

Revision No. : 2

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.

SAFETY DATA SHEET

Prepared for: 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	
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc using information provided by / obtained from FPPF Chemical Company, Inc and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and FPPF Chemical Company, Inc expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.
This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc and FPPF Chemical Company, Inc.

END OF DOCUMENT