
Section 1: Product and Company Identification

Product Name: zMAX Engine Formula

Product No.: 51-212

Manufacturer Information: Oil-Chem Research Corp.
6800 W. 73rd Street
Bedford Park, IL 60638
Ph#: (708)728-0028

Emergency Contact: Chemtrec (800)424-9300

Recommended Use of Product: A highly refined petroleum product that is typically used for applications including fuel, engine and transmission micro-lubrication treatment.

Section 2: Hazard Identification

Emergency Overview

Appearance	Liquid
Color	Purple Clear and Bright
Odor	Slight Petroleum Oil, Slight Ether

GHS Classification

Aspiration Hazard:

Category 1

GHS Label Element

Hazard Pictograms:



Signal Word:

Danger

Hazard Statement:

H304; May be fatal if swallowed and enters airways.

Precautionary Statement:

Response: P301 + P310 IF SWALLOWED: Immediately Call A POISON CENTER, or Doctor/ Physician.
P331 DO NOT Induce Vomiting.

Storage: P405 Store locked up.

Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Potential Health Effects:

Eye Contact

Ingestion
Inhalation
Skin Contact

Aggravated Medical Condition:

None known.

Carcinogenicity:

IARC:

No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH:

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA:

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP:

No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Section 3: Composition / Information on Ingredients

Pure Substance/Mixture:

Pure Substance

Hazardous Components

Chemical Name	CAS-No.	Concentration %
White Mineral Oil (Petroleum)	8042-47-5	99%

Section 4: First- Aid Measures

Skin Contact:

Wash skin with soap and water; seek medical attention if irritation occurs.

Eye Contact:

Check for and remove any contact lenses, flush eye with water for 15 minutes; seek medical attention if irritation occurs.

Inhalation:

In case of excessive levels of material inhaled move exposed person to fresh air; seek medical attention if coughing or breathing issues occur.

Ingestion:

DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this product are ingested call a POISON CENTER, or doctor/ physician immediately.

Most Important Symptoms & Effects,
Both Acute & Delayed:

Loosen tight clothing such as collars and waist band.

First aider needs to protect himself.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Dry Chemical
Carbon Dioxide (in case of small fires)
Water Fog
Foam
Sand, Earth.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire Fighting:

Cool closed containers exposed to fire with water spray.

Hazardous Combustion Products:

Following products may be produced during a fire; Carbon oxides (CO, CO₂), smoke and irritating vapors as products of incomplete combustion.

Fire Fighting Precautions:

Do Not direct a solid stream of water or foam into burning material; this may cause splatter spreading the fire.

Protective Equipment:

Self contained breathing apparatus.

Further Information:

Prevent fire extinguishing runoff from contaminating surface water or ground water system.

Section 6: Accidental Release Measures

Personal Precautions, Protective
Equipment and Emergency Procedures:

Wear suitable protective equipment.
Product can create slippery conditions.
Ensure adequate ventilation.
Evacuate personnel to safe area.

Environmental Precautions:

Avoid runoff to sewers or waterways.
Do not allow uncontrollable discharge of product into the environment.

Methods & Materials For Containment
And Cleaning:

Dike off area of the spill to prevent further spreading of liquid.
Clean up promptly by pumping the liquid into a salvage tank or soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

Section 7: Handling and Storage

Precautions for Safe Handling:	Do Not handle at temperatures > +60° C For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Keep away from heat and source of ignition. Keep container closed when not in use.
Conditions for Safe Storage:	Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry, cool and well ventilated place. Keep in properly labeled containers. To maintain product quality do not store in heat or direct sunlight.

Section 8: Exposure Controls / Personal Protection

Components with Workplace Control Parameters

Contains no substances with occupational exposure limit value.

Engineering Measures: No special ventilation requirements. Good general ventilation should be sufficient to control workers exposure to air born contaminants.

Personal Protective Equipment:

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessments demonstrated are within recommended exposure guide lines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter Type: Organic vapor filter.

Hand Protection: Neoprene, Nitrile, Polyvinyl Alcohol (PVA), Viton (R).

Remarks: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye Protection: Safety glasses. Wear face shield and protective suit for abnormal processing problems.

Skin and Body Protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work place.

Protective Measures:	Wash contaminated clothing before re-use. No special protective equipment required.
Hygiene Measures:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section 9: Physical and Chemical Properties

Appearance:	Purple Clear and Bright Liquid
Color:	Purple
Odor:	Slight Petroleum Oil, Slight Ether
Odor Threshold:	No data available
pH:	No data available
Pour Point:	-20° C (-4° F)
Melting Point:	Not determined
Freezing Point:	Not determined
Boiling Point Boiling Range:	No data available
Flash Point:	132°C / 270°F
Evaporation Rate:	No data available
Flammability:	Low Fire Hazard. This Material must be heated before ignition will occur.
Upper Explosive Limit:	No data available
Lower Explosive Limit:	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	0.846 kg/l (15° C / 59° F)
Solubility (ies)	
Water Solubility:	Insoluble
Partition Coefficient: n-octano/water	No data available
Auto Ignition Temperature:	No data available
Decomposition Temperature:	No data available

Viscosity

Viscosity, Kinematic: 11-14 cST (40° C / 104° F)

2.9-3.2 cST (100° C / 212° F)

Explosive Properties: Do Not: pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or source of ignition.

Section 10: Stability and Reactivity

Reactivity: Stable under normal conditions.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reaction: Stable under normal conditions.

Conditions to Avoid: No data available

Incompatible Materials: React with oxidizing agents.

Hazardous Decomposition Products: May release CO_x, smoke and irritating vapors when heated to decomposition.

Section 11: Toxicological Information

Information on Likely Routes of Exposure: Eye Contact
Ingestion
Inhalation
Skin Contact

Acute Toxicity

Product:

Acute Oral Toxicity: Remarks: No data available

Acute Inhalation Toxicity: Remarks: No data available

Acute Dermal Toxicity: Remarks: No data available

Components:

White Mineral Oil (Petroleum)

Acute Oral Toxicity: LD50 (RAT) : >5,000 mg/kg

Acute Inhalation Toxicity: LC50 (RAT) : >5.2 mg/l
Exposure Time: 4 h
Test Atmosphere: Dust/Mist

Safety Data Sheet
zMAX Engine Formula

Acute Dermal Toxicity:	LD50 (Rabbit) : >2,000 mg/kg
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Skin Corrosion/Irritation

Product:

Remarks:	No data available
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Components:

White Mineral Oil (Petroleum)

Result:	Mild Skin Reaction
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Serious Eye Damage/Eye Irritation

Product:

Remarks:	No data available
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Components:

White Mineral Oil (Petroleum)

Result:	Mild Eye Irritation
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Respiratory or Skin Sensitivity:	No data available
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Germ Cell Mutation:	No data available
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Carcinogenicity:	No data available
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Reproductive Toxicity:	No data available
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STOT- Single Exposure:	No data available
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STOT- Repeated Exposure:	No data available
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Section 12: Ecological Information

Eco-toxicity

Product:

Toxicity to Fish:	Remarks: No data available
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Toxicity to Daphnia and Other Aquatic Invertebrates:	Remarks: No data available
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Toxicity to Algae:	Remarks: No data available
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Toxicity to Bacteria:	Remarks: No data available
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Persistence and Degradability

Product:

Biodegradability:	Remarks: No data available
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Bio-accumulative Potential:	No data available
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Mobility in Soil:	No data available
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Other Adverse Effects:	No data available
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Section 13: Disposal Considerations

Disposal Methods

Waste from Residues:

The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labeled prior to recycling or disposal.
Send to a license waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product in accordance with the instructions of the person responsible for waste disposal.

Section 14: Transport Information

International Regulations

IATA-DGR:

Not regulated as a dangerous good.

IMDG-Code:

Not regulated as a dangerous good.

49 CFR:

Not regulated as a dangerous good.

TDG:

Not regulated as a dangerous good.

Special Precautions for User:

Not applicable

Section 15: Regulatory Information

OSHA Hazards:

No OSHA hazards.

The components of this product are reported in the following inventories:

DSL:

On the inventory, or in compliance with the inventory

TSCA:

All chemical substances in this product are either listed on the TSCA Inventory exemption.

EINECS:

On the inventory, or in compliance with the inventory.

IECSC:

On the inventory, or in compliance with the inventory.

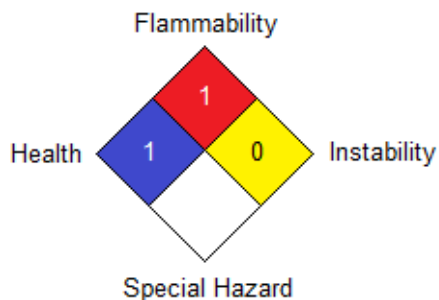
Section 16: Other Information

Further Information

NFPA:

HMIS III:

0= Not Significant
1= Slight
2= Moderate
3= High
4= Extreme
*= Chronic



Health	1
Flammability	1
Physical Hazard	0
Personal Protection	B

Date of Issue: 5/27/2015

Prepared by: Arnel D. Potter PhD
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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in text.

Section 1: Product and Company Identification

Product Name: zMAX Fuel Formula

Product No.: 51-112

Manufacturer Information: Oil-Chem Research Corp.
6800 W. 73rd Street
Bedford Park, IL 60638
Ph#: (708)728-0028

Emergency Contact: Chemtrec (800)424-9300

Recommended Use of Product: A highly refined petroleum product that is typically used for applications including fuel, engine and transmission micro-lubrication treatment.

Section 2: Hazard Identification

Emergency Overview

Appearance	Liquid
Color	Clear and Bright
Odor	Slight Petroleum Oil, Slight Ether

GHS Classification

Aspiration Hazard: Category 1

GHS Label Element

Hazard Pictograms:



Signal Word: Danger

Hazard Statement: H304; May be fatal if swallowed and enters airways.

Precautionary Statement: **Response:** P301 + P310 IF SWALLOWED: Immediately Call A POISON CENTER, or Doctor/ Physician.
P331 DO NOT Induce Vomiting.

Storage: P405 Store locked up.

Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Potential Health Effects:

Eye Contact
Ingestion
Inhalation
Skin Contact

Aggravated Medical Condition:

None known.

Carcinogenicity:

IARC:

No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH:

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA:

No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP:

No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Section 3: Composition / Information on Ingredients

Pure Substance/Mixture:

Pure Substance

Hazardous Components

Chemical Name	CAS-No.	Concentration %
White Mineral Oil (Petroleum)	8042-47-5	99%

Section 4: First- Aid Measures

Skin Contact:

Wash skin with soap and water; seek medical attention if irritation occurs.

Eye Contact:

Check for and remove any contact lenses, flush eye with water for 15 minutes; seek medical attention if irritation occurs.

Inhalation:

In case of excessive levels of material inhaled move exposed person to fresh air; seek medical attention if coughing or breathing issues occur.

Ingestion:

DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this product are ingested call a

Most Important Symptoms & Effects,
Both Acute & Delayed:

POISON CENTER, or doctor/ physician
immediately. Loosen tight clothing such as
collars and waist band.

First aider needs to protect himself.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Dry Chemical
Carbon Dioxide (in case of small fires)
Water Fog
Foam
Sand, Earth.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire Fighting:

Cool closed containers exposed to fire with
water spray.

Hazardous Combustion Products:

Following products may be produced during a
fire; Carbon oxides (CO, CO₂), smoke and
irritating vapors as products of incomplete
combustion.

Fire Fighting Precautions:

Do Not direct a solid stream of water or foam
into burning material; this may cause splatter
spreading the fire.

Protective Equipment:

Self contained breathing apparatus.

Further Information:

Prevent fire extinguishing runoff from
contaminating surface water or ground water
system.

Section 6: Accidental Release Measures

Personal Precautions, Protective
Equipment and Emergency Procedures:

Wear suitable protective equipment.
Product can create slippery conditions.
Ensure adequate ventilation.
Evacuate personnel to safe area.

Environmental Precautions:

Avoid runoff to sewers or waterways.
Do not allow uncontrollable discharge of product
into the environment.

Methods & Materials For Containment
And Cleaning:

Dike off area of the spill to prevent further
spreading of liquid.
Clean up promptly by pumping the liquid into a
salvage tank or soak up with inert absorbent
material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

Section 7: Handling and Storage

Precautions for Safe Handling:

Do Not handle at temperatures > +60° C
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and source of ignition.
Keep container closed when not in use.

Conditions for Safe Storage:

Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well ventilated place.
Keep in properly labeled containers.
To maintain product quality do not store in heat or direct sunlight.

Section 8: Exposure Controls / Personal Protection

Components with Workplace Control Parameters

Contains no substances with occupational exposure limit value.

Engineering Measures:

No special ventilation requirements. Good general ventilation should be sufficient to control workers exposure to air born contaminants.

Personal Protective Equipment:

Respiratory Protection:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessments demonstrated are within recommended exposure guide lines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter Type:

Organic vapor filter.

Hand Protection:

Neoprene, Nitrile, Polyvinyl Alcohol (PVA), Viton (R).

Remarks:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye Protection:	Safety glasses. Wear face shield and protective suit for abnormal processing problems.
Skin and Body Protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work place.
Protective Measures:	Wash contaminated clothing before re-use. No special protective equipment required.
Hygiene Measures:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section 9: Physical and Chemical Properties

Appearance:	Clear and Bright Liquid
Color:	Clear
Odor:	Slight Petroleum Oil, Slight Ether
Odor Threshold:	No data available
pH:	No data available
Pour Point:	-20° C (-4° F)
Melting Point:	Not determined
Freezing Point:	Not determined
Boiling Point Boiling Range:	No data available
Flash Point:	132° C / 270° F
Evaporation Rate:	No data available
Flammability:	Low Fire Hazard. This Material must be heated before ignition will occur.
Upper Explosive Limit:	No data available
Lower Explosive Limit:	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	0.846 kg/l (15° C / 59° F)
Solubility (ies)	
Water Solubility:	Insoluble
Partition Coefficient:	No data available

Safety Data Sheet
zMAX Fuel Formula

n-octano/water

Auto Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity

Viscosity, Kinematic: 11-14 cST (40° C / 104° F)

2.9-3.2 cST (100° C / 212° F)

Explosive Properties: Do Not: pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or source of ignition.

Section 10: Stability and Reactivity

Reactivity: Stable under normal conditions.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reaction: Stable under normal conditions.

Conditions to Avoid: No data available

Incompatible Materials: React with oxidizing agents.

Hazardous Decomposition Products: May release CO_x, smoke and irritating vapors when heated to decomposition.

Section 11: Toxicological Information

Information on Likely Routes of Exposure: Eye Contact
Ingestion
Inhalation
Skin Contact

Acute Toxicity

Product:

Acute Oral Toxicity: Remarks: No data available

Acute Inhalation Toxicity: Remarks: No data available

Acute Dermal Toxicity: Remarks: No data available

Components:

White Mineral Oil (Petroleum)

Acute Oral Toxicity:	LD50 (RAT) : >5,000 mg/kg
Acute Inhalation Toxicity:	LC50 (RAT) : >5.2 mg/l Exposure Time: 4 h Test Atmosphere: Dust/Mist
Acute Dermal Toxicity:	LD50 (Rabbit) : >2,000 mg/kg

Skin Corrosion/Irritation

Product:

Remarks:	No data available
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Components:

White Mineral Oil (Petroleum)

Result:	Mild Skin Reaction
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Serious Eye Damage/Eye Irritation

Product:

Remarks:	No data available
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Components:

White Mineral Oil (Petroleum)

Result:	Mild Eye Irritation
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Respiratory or Skin Sensitivity:	No data available
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Germ Cell Mutation:	No data available
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Carcinogenicity:	No data available
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Reproductive Toxicity:	No data available
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STOT- Single Exposure:	No data available
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STOT- Repeated Exposure:	No data available
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Section 12: Ecological Information

Eco-toxicity

Product:

Toxicity to Fish:	Remarks: No data available
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Toxicity to Daphnia and Other Aquatic Invertebrates:	Remarks: No data available
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Toxicity to Algae:	Remarks: No data available
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Toxicity to Bacteria:	Remarks: No data available
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Persistence and Degradability

Product:

Biodegradability:	Remarks: No data available
Bio-accumulative Potential:	No data available
Mobility in Soil:	No data available
Other Adverse Effects:	No data available

Section 13: Disposal Considerations

Disposal Methods

Waste from Residues:	The product should not be allowed to enter drains, water courses or the soil. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste must be classified and labeled prior to recycling or disposal. Send to a license waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of product in accordance with the instructions of the person responsible for waste disposal.
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Section 14: Transport Information

International Regulations

IATA-DGR:	Not regulated as a dangerous good.
IMDG-Code:	Not regulated as a dangerous good.
49 CFR:	Not regulated as a dangerous good.
TDG:	Not regulated as a dangerous good.
Special Precautions for User:	Not applicable

Section 15: Regulatory Information

OSHA Hazards:	No OSHA hazards.
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The components of this product are reported in the following inventories:

DSL:	On the inventory, or in compliance with the inventory
TSCA:	All chemical substances in this product are either listed on the TSCA Inventory exemption.
EINECS:	On the inventory, or in compliance with the inventory.

IECSC:

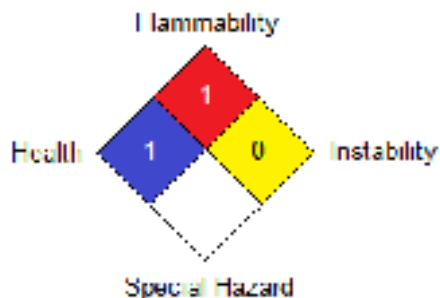
On the inventory, or in compliance with the inventory.

Section 16: Other Information

Further Information

NFPA:

HMIS III:



Health	1
Flammability	1
Physical Hazard	0
Personal Protection	R

0= Not Significant
1= Slight
2= Moderate
3= High
4= Extreme
*= Chronic

Date of Issue: 5/27/2015

Prepared by: Arnel D. Potter PhD
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Ph#: 847-234-1282

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