



FPPF Chemical Company, Inc.  
100 Dings St.  
Buffalo, NY, USA, 14206  
Telephone: (800) 735-3773

Killem

SDS Revision Date (mm/dd/yyyy): 04/20/2024

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## SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Killem**

Other means of identification : 90119, 90330, 00170

Recommended use of the chemical and restrictions on use

: Biocidal product.  
No restrictions on use known.

Chemical family

: Mixture.

Name, address, and telephone number  
of the supplier:

**FPPF Chemical Company, Inc.**

100 Dings St.  
Buffalo, NY, USA 14206

Supplier's Telephone # : (800) 735-3773

24 Hr. Emergency Tel # : PERS: North America 1-800-633-8253; International: +1-801-629-0667

Contract number: 8027

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear amber liquid. Slight odor.

Most important hazards: Fatal if inhaled. Causes skin and eye burns. Combustible liquid. May be ignited by open flames and sparks. May cause an allergic skin reaction.

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).

Hazard classification :

Flammable Liquid - Category 4

Acute toxicity, inhalation - Category 2

Skin Corrosion/Irritation - Category 1

Eye Damage/Irritation - Category 1

Skin sensitization - Category 1

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

Combustible liquid.

Causes severe skin burns and eye damage.

Fatal if inhaled.

May cause an allergic skin reaction.



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### Precautionary statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Wear protective gloves/clothing and eye/face protection.

[In case of inadequate ventilation] wear respiratory protection.

Use only outdoors or in a well-ventilated area.

Do not breathe mist.

Wash thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before re-use.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Immediately call a poison center/doctor.

In case of fire: Use water fog, dry chemical, CO2 or 'alcohol' foam to extinguish.

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

Dispose of contents/container in accordance with local regulation.

### Other hazards

Other hazards which do not result in classification: Burning produces obnoxious and toxic fumes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Thiocyanates	Proprietary	Proprietary	Proprietary
Thiocyanates methyl esters	Proprietary	Proprietary	Proprietary

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* : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth if victim is unconscious. Immediately call a POISON CENTER or doctor/physician.
- Inhalation* : Call a physician immediately. If inhaled: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration.
- Skin contact* : IF ON SKIN: Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTER or doctor/physician.
- Eye contact* : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 20 minutes. Immediately call a POISON CENTER or doctor/physician.



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

- : Fatal if inhaled. Symptoms may include coughing, choking and wheezing. Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. Causes skin burns. Symptoms may include redness, blistering, pain and swelling. May cause an allergic skin reaction (e.g. swelling, rash and eczema).

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

- : Immediate medical attention is required. Causes chemical burns. Treat symptomatically. Contains isocyanates. See information supplied by the manufacturer.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

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

#### *Unsuitable extinguishing media*

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

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

- : Combustible liquid and vapor. Keep away from heat, sparks and open flames. May be sensitive to static discharge. 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; Sulfur oxides; hydrogen cyanide

### 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. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. A full-body encapsulating chemical protective suit with positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

#### *Special fire-fighting procedures*

- : Move containers from fire area if safe to do so. Use water spray to keep containers cool. 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

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Individuals involved in the cleanup must wear appropriate personal protective equipment. For personal protection see section 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. Dike for water control. 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. Use only non-sparking tools. 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.



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### Special spill response procedures

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): See section 15.

## SECTION 7. HANDLING AND STORAGE

### Precautions for safe handling

- : In case of inadequate ventilation wear respiratory protection. Wear protective gloves/clothing and eye/face protection.  
Keep away from flames and hot surfaces. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. Do not breathe mist. Avoid contact with eyes, skin and clothing. Wash hands thoroughly after handling. Avoid contact with incompatible materials.

- Conditions for safe storage** : Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F. Store locked up. Store away from incompatibles and out of direct sunlight. 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** : Oxidizing agents

## 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>
Thiocyanates	N/Av	N/Av	N/Av      N/Av
Thiocyanates methyl esters	N/Av	N/Av	N/Av      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. 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.

- 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 as appropriate: Safety glasses with side-shields or chemical splash goggles. A full face shield may also be necessary.

- Other protective equipment** : Eye wash facilities and emergency shower must be available when handling this product. Other equipment may be required depending on workplace standards.



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### General hygiene considerations

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

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : Liquid.
- Color : Clear amber
- Odor : Slight odour.
- Odour threshold : N/Av
- pH : N/Av
- Melting Point/Freezing point :  $< -30^{\circ}\text{C}$  ( $< -22^{\circ}\text{F}$ )

#### Initial boiling point and boiling range

- :  $>100^{\circ}\text{F}$  ( $>212^{\circ}\text{C}$ )
- Flash point :  $70^{\circ}\text{C}$  ( $158^{\circ}\text{F}$ )
- Flashpoint (Method) : Tag closed cup
- Evaporation rate (BuAe = 1) : N/Av

- Flammability : Flammable

#### Lower flammable limit (% by vol.)

- : N/Av

#### Upper flammable limit (% by vol.)

- : N/Av

- Oxidizing properties : None.

- Explosive properties : Not explosive

- Vapour pressure : N/Av

- Vapour density : N/Av

#### Relative density / Specific gravity

- : 1.03

- Solubility in water : N/Av

- 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

#### Particle characteristics

- : N/Av

#### Other physical/chemical comments

- : None known or reported by the manufacturer.

### SECTION 10. STABILITY AND REACTIVITY

- Reactivity : Not normally reactive.

- Chemical stability : Stable under normal conditions.

#### Possibility of hazardous reactions

- : Hazardous polymerization does not occur.



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- Conditions to avoid** : Keep away from heat, sparks and flame. Do not use in areas without adequate ventilation. Take precautionary measures against static discharge. Avoid contact with incompatible materials.
- Incompatible materials** : Oxidizing agents
- Hazardous decomposition products** : hydrogen cyanide 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** : NO
- Routes of exposure skin absorption** : YES

#### Potential Health Effects:

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

###### *Sign and symptoms Inhalation*

- : Fatal if inhaled. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing.

###### *Sign and symptoms ingestion*

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

###### *Sign and symptoms skin*

- : Causes severe burns. Symptoms may include blistering, ulcerations and scarring.

###### *Sign and symptoms eyes*

- : Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage.

##### **Potential Chronic Health Effects**

- : Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

##### **Mutagenicity**

- : Not expected to be mutagenic in humans.

##### **Carcinogenicity**

- : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

##### **Reproductive effects & Teratogenicity**

- : This product is not expected to cause reproductive or developmental effects.

##### **Sensitization to material**

- : May cause an allergic skin reaction (e.g. swelling, rash and eczema). Not expected to be a respiratory sensitizer.

##### **Specific target organ effects**

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

##### **Medical conditions aggravated by overexposure**

- : Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used.

##### **Synergistic materials**

- : Not available.

##### **Toxicological data**

- : The calculated ATE values for this mixture are: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.  
ATE oral = 2676 mg/kg  
ATE inhalation (mists) = 0.28 mg/L



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<u>Chemical name</u>	LC <sub>50</sub> (4hr)	LD <sub>50</sub>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Thiocyanates	0.0077mg/L	55 mg/kg	N/Av
Thiocyanates methyl esters	N/Av	2 g/kg	>5 g/kg

### Other important toxicological hazards

: None known or reported by the manufacturer.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : Very toxic to aquatic life with long lasting effects. Avoid release to the environment.

### Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC <sub>50</sub> / 96h	NOEC / 21 day	M Factor
Thiocyanates	Proprietary	0.23 mg/L	N/Av	N/Av
Thiocyanates methyl esters	Proprietary	N/Av	N/Av	N/Av

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC <sub>50</sub> / 48h	NOEC / 21 day	M Factor
Thiocyanates	Proprietary	0.011 mg/L	N/Av	N/Av
Thiocyanates methyl esters	Proprietary	N/Av	N/Av	N/Av

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC <sub>50</sub> / 96h or 72h	NOEC / 96h or 72h	M Factor
Thiocyanates	Proprietary	N/Av	N/Av	N/Av
Thiocyanates methyl esters	Proprietary	N/Av	N/Av	N/Av

### Persistence and degradability

: No data is available on the product itself.

### Bioaccumulation potential

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



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<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Thiocyanates	N/Av	N/Av
Thiocyanates methyl esters	3.23	N/Av

**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. 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 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.













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### SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN2922	CORROSIVE LIQUID, TOXIC, N.O.S. (Methylene bis thiocyanate)	8(6.1)	III	 
TDG Additional information	May be shipped as a Limited Quantity when transported in containers no larger than 5 L (1.3 gallons); in packages not exceeding 30 kg (66 pounds) gross mass.				
IMDG	UN2922	CORROSIVE LIQUID, TOXIC, N.O.S. (Methylene bis (thiocyanate)	8(6.1)	III	 
IMDG Additional information	Consult the IMDG regulations for exceptions.				
ICAO/IATA	UN2922	Corrosive liquid, toxic, n.o.s.(Methylene bis thiocyanate)	8(6.1)	III	 
ICAO/IATA Additional information	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.				
49CFR/DOT	UN2922	Corrosive liquids, toxic, n.o.s. .((Methylene bis thiocyanate)	8	III	 
49CFR/DOT Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.154.				

**Special precautions for user** : Appropriate advice on safety must accompany the package. Keep away from heat, sparks and open flame - No smoking.

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

### 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
Thiocyanates	Proprietary	Yes	N/Ap	N/Av	No	No
Thiocyanates methyl esters	Proprietary	No	N/Ap	N/Av	No	No



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SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Flammable; Skin corrosion; Acute toxicity ; Eye Damage; Skin sensitization.

### 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
Thiocyanates	Proprietary	No	N/Ap	No	No	No	No	No	No
Thiocyanates methyl esters	Proprietary	No	N/Ap	No	Yes	No	Yes	No	No

### Canadian Information:

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

### International Information:

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

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Thiocyanates	Proprietary	Proprietary	Present	Present	Present	Present	Present	Present
Thiocyanates methyl esters	Proprietary	Proprietary	Present	Present	Present	Present	Present	Present

## SECTION 16. OTHER INFORMATION

### Legend

: ACGIH: American Conference of Governmental Industrial Hygienists  
ATE: Acute Toxicity Estimate  
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  
EPA: Environmental Protection Agency



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IARC: International Agency for Research on Cancer  
IECSC: Inventory of Existing Chemical Substances  
IMDG: International Maritime Dangerous Goods  
KECI: Korean Existing Chemicals Inventory  
KECL: Korean Existing Chemicals List  
LC: Lethal Concentration  
LD: Lethal Dose  
N/Ap: Not Applicable  
N/Av: Not Available  
NIOSH: National Institute of Occupational Safety and Health  
NOEC: No observable effect concentration  
NTP: National Toxicology Program  
OECD: Organisation for Economic Co-operation and Development  
OSHA: Occupational Safety and Health Administration  
PEL: Permissible exposure limit  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
SARA: Superfund Amendments and Reauthorization Act  
SDS: Safety Data Sheet  
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

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### DISCLAIMER

The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. 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 FPPF Chemical Company, Inc.

### END OF DOCUMENT

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