



# SAFETY DATA SHEET

## PRO-FLUSH

Effective Date: 1 June 2015

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### SECTION 1. Identification of the Substance/Mixture and of the Company

#### 1.1 Product Identifier

Formulation Identifier: Pro-Flush ULV Flushing Solution

Product Identification: 11520C

#### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Industrial use only. As a solvent to flush spraying (application) systems of non-aqueous insecticides such as malathion, pyrethrins, pyrethroids, vegetable and mineral oils.

#### 1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.  
675 Sidwell Court  
St. Charles, IL 60174 U.S.A.  
+1 (630) 894-2000  
Email: Clarke@clarke.com

#### 1.4 Emergency Telephone Number

Medical Emergency: Toll-free (800) 214-7753

Transportation Emergencies: call INFOTRAC: (800) 535-5053

### SECTION 2. Hazards identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS (2012)

#### 2.1 Classification of the Substance or Mixture

##### Classification

Flammable Liquid, Category 2  
Acute Toxicity, Oral, Category 3  
Aspiration Hazard, Category 1  
Skin Irritation, Category 2  
Eye Irritation, Category 2  
STOT, Single Exposure, Category 3, RTI  
STOT, Single Exposure, Category 3, NE  
STOT, Single Exposure, Category 2  
Carcinogenicity, Category 2  
STOT, Repeat Exposure, Category 2

##### Hazard Statements

Highly flammable liquid and vapor  
Toxic if swallowed  
May be fatal if swallowed and enters airways  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
May cause drowsiness or dizziness  
May cause damage to organs  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure

#### 2.2 Label Elements

Pictogram(s):



Signal Word:

DANGER

Precautionary Statements:

PREVENTION: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.



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Keep away from heat, hot surfaces, sparks, open flames, hot surfaces and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Do not breathe mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves, eye protection/face protection. Do not eat, drink or smoke when using this product.

**RESPONSE:** IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs, get medical attention.

IF SWALLOWED: Immediately call a poison center or doctor. Do NOT induce vomiting. Rinse mouth.

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 INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a poison control center/doctor for treatment advice if you feel unwell.

If exposed or concerned or if you feel unwell, call a poison control center or doctor for medical advice.

In case of fire: use carbon dioxide, dry chemical, foam, water fog to extinguish.

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

**DISPOSAL:** Dispose of contents and container in accordance with local/regional/national regulations.

### SECTION 3. Composition/Information on Ingredients

#### 3.1 Components

Chemical Name	CAS No.	Concentration % w/w
Synthetic isoparaffinic hydrocarbon	64742-48-9	43 – 61
Ethyl alcohol	64-17-5	30 – 42
2-propanol	67-3-0	1 – 4
Methanol	67-56-1	1 – 4
4-methyl-2-pentanone	108-10-1	< 0.05 – 0.40

Any ingredients not identified are non-hazardous and/or not required to be disclosed as defined under OSHA 2012 HCS, and are withheld as trade secret.

### SECTION 4. First Aid Measures

#### 4.1 Description of First Aid Measures

**Eye contact:** Immediately flush eyes with water. Flush eyes with water for a minimum of 5 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. Remove contact lenses if worn.

**Skin contact:** Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately and clean shoes before reuse.

**Inhalation:** Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention. To prevent aspiration, keep head below knees.

**Ingestion:** DO NOT induce vomiting. Do not give liquids. Obtain emergency medical attention.

#### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed.



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Vapors Vapors can cause irritation of the respiratory tract. High concentrations can cause headache, nausea, weakness, lightheadedness, and stupor (CNS depression). May cause dizziness and drowsiness.

Ingestion: May be fatal or cause blindness if swallowed. Harmful or fatal if liquid is aspirated into lungs.

### 4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

## SECTION 5. Fire-Fighting Measures

### 5.1 Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO<sub>2</sub>), Dry Chemical, Foam

Unsuitable Extinguishing Media: None known

### 5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Highly flammable liquid and vapor. May cause flash fire or explosion. Vapors can travel to a source of ignition and flash back. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Also, do not reuse container without commercial cleaning or reconditioning.

### 5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

Special Procedures: Avoid use of solid water streams. Use water with caution. Material will float and may ignite on surface water. Water may be ineffective in fighting the fire. Water spray to cool containers or protect personnel. Use water spray to knock down vapors. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

## SECTION 6. Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Wear a self-contained breathing apparatus and appropriate personal protective equipment (see section 8). Eliminate all ignition sources. Prevent additional discharge of material if able to do so safely. Do not touch or walk through spilled material. Avoid runoff into storm sewers and ditches which lead to waterways. Ventilate spill area. Stay upwind of spill. A vapor suppressing foam may be used to reduce vapors.

### 6.2 Methods and Material for Containment and Cleaning Up

Clean up methods: Collect spilled materials for disposal. Use only non-combustible material for clean-up. Remove from surface by skimming or with suitable absorbents. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

## SECTION 7. Handling and Storage

### 7.1 Precautions for Safe Handling

Use only in a well ventilated area. Avoid breathing vapor, fumes or mist. Avoid contact with eyes, skin, and clothing. Potential peroxide former. If peroxide formation is suspected, do not open or move container. Take precautionary measures against static discharge. When transferring, follow proper grounding procedures. Use spark-resistant tools. Do not load into compartments adjacent to heated cargo. Use explosion proof equipment. Always open containers slowly to allow any



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excess pressure to vent. Follow all SDS/label precautions even after containers are emptied because they may contain product residues.

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

Keep away from heat, sparks, and flame. Store containers in a cool, well ventilated place. Keep container closed when not in use. Protect from direct sunlight. Static Discharge: materials can accumulate static discharge which can cause an incendiary electrical discharge. Material is a static accumulator which has the potential of forming ignitable vapor-air mixtures in storage tanks.

## SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

### 8.1 Control Parameters

Chemical Name	CAS No.	List	Type	Value
Synthetic isoparaffinic hydrocarbon	64742-48-9	ACGIH OSHA	TLV-TWA PEL-TWA	400 ppm 400 ppm
Ethyl alcohol	64-17-5	ACGIH OSHA	TLV STEL PEL-TWA	1000.0 ppm 1000.0 ppm
2-propanol	67-63-0	ACGIH ACGIH OSHA	TLV-TWA TLV STEL PEL-TWA	200 ppm 400 ppm 400 ppm
Methanol	67-56-1	ACGIH ACGIH OSHA	TLV-TWA TLV STEL PEL-TWA	200 ppm 250 ppm 200 ppm
4-methyl-2-pentanone	108-10-1	ACGIH ACGIH OSHA	TLV-TWA TLV STEL PEL-TWA	20 ppm 75 ppm 100 ppm

### 8.2 Exposure controls

- Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations.
- Respiratory Protection: NIOSH/MSHA approved respirators may be necessary if airborne concentrations are expected to exceed exposure limits.
- Skin Protection: Wear impervious gloves to prevent contact with the skin. Wear long sleeves when contact is likely to occur. Wear protective gear as needed – apron, suit, boots.
- Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield.
- Other equipment: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Hygienic practices: Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating

## SECTION 9. Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

- Appearance: Colorless liquid
- Color: Colorless
- Odor: Typical of alcohol
- Odor Threshold: Not determined
- pH: Not determined
- Melting Point: Not applicable



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Freezing Point:	Not determined
Initial Boiling Point:	Wide range: 64-197 °C (148-386 °F)
Flash Point:	14 °C (57.2 °F), Pensky Martens Closed Cup
Evaporation Rate:	Not determined
Lower Explosive limit [@ 25 °C]:	0.6%
Upper Explosive Limit [@ 25°C]:	20%
Vapor Pressure:	< 55 mm HG @ 25°C
Vapor Density:	> 1.5 (Air = 1)
Specific Gravity:	0.77 (Water = 1)
Solubility:	< 50%
Partition Coefficient:	Not determined
Auto-Ignition Temperature:	400 °C (estimated, ASTM D 2155)
Viscosity:	Not determined
Decomposition Temperature:	Not available
Oxidizing Properties:	Not Available

### SECTION 10. Stability and Reactivity

#### 10.1 Reactivity

No information

#### 10.2 Chemical Stability

No information

#### 10.3 Possibility of Hazardous Reactions

Hazardous Reactions: No information

Hazardous Polymerization: Not known to occur

#### 10.4 Conditions to avoid

Prevent contact with combustible materials.

#### 10.5 Incompatible materials

Prevent contact with strong oxidizing agents. Avoid contact with caustics. Keep separate from alkalis. Prevent contact with aldehydes. Avoid contact with chlorinated compounds. Avoid contact with hydrogen peroxide, chromic anhydride, nitric acid, mixed nitric/sulfuric acid, nitrosyl perchlorate, permonosulfuric acids, potassium tert-butoxide, sodium hypobromite, chlorinated melamine. Prevent contact with halogens. Avoid contact with amines. Keep away from acids.

#### 10.6 Hazardous decomposition products

Toxic gases/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed. May form peroxides of unknown stability. Combustion can lead to the formation of formaldehyde. Combustion can lead to formation of formic acid.

### SECTION 11. Toxicological information

#### 11.1 Information on Likely Routes of Exposure

Primary route(s) of entry: Eye Contact, Ingestion, inhalation, Skin Absorption, Skin Contact

#### 11.2 Information on Toxicological Effects

EFFECTS OF OVEREXPOSURE – INHALATION: Prolonged inhalation may be harmful. Vapors can cause irritation of the respiratory tract. High concentrations can cause headache, nausea, weakness, lightheadedness, and stupor (CNS depression). May cause dizziness and drowsiness.



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**EFFECTS OF OVEREXPOSURE – SKIN CONTACT:** Causes skin irritation. Skin absorption may add significantly to the overall toxic effect. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Personnel with pre-existing skin disorders should avoid contact with this product.

**EFFECTS OF OVEREXPOSURE – EYE CONTACT:** Moderately irritating to the eyes causing transient corneal injury. Symptoms may include stinging, tearing, redness and swelling.

**EFFECTS OF OVEREXPOSURE – INGESTION:** May be fatal or cause blindness if swallowed. Harmful or fatal if liquid is aspirated into lungs. Ingestion may cause gastrointestinal tract irritation. Ingestion may cause liver and kidney damage. Ingestion may result in nausea, vomiting, diarrhea and restlessness. May cause central nervous system depression.

**EFFECTS OF OVEREXPOSURE – CHRONIC HAZARDS:** Material is slowly eliminated from the body; therefore it can have cumulative toxicity effects with repeated exposures. Ethanol possesses properties that indicate a carcinogenicity, lactation, and developmental hazard for human health but these are manifest only at doses associated with consumption of alcoholic beverages. In the context of an industrial chemical, these hazards are not likely to result from the manufacture and use of ethanol and ethanol containing products as intended. Overexposure may cause nervous system damage. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Overexposure may cause kidney damage. Vapors irritating to eyes and respiratory tract. Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system, central nervous system, kidney, liver, skin, and/or eyes.

### Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below:

Chemical Name	CAS No.	Oral LD50, mg/kg	Dermal LD50, mg/kg	Vapor LC50, mg/L
Synthetic isoparaffinic hydrocarbon	64742-48-9	> 10,000	> 3,160	> 20.0
Ethyl alcohol	64-17-5	> 7,060	> 1,440	> 19,977
2-propanol	67-63-0	> 5,850	> 12,800	> 25,000
Methanol	67-56-1	5,628	15,800	20.0
4-methyl-2-pentanone	108-10-1	> 2,080	> 2,000	16.4

## SECTION 12. Ecological Information

### 12.1 Ecotoxicity

No information

## SECTION 13. Disposal Considerations

### 13.1 Waste Treatment and Disposal methods

**DISPOSAL METHOD:** Dispose of waste in accordance with all local, state and federal regulations.

**WASTE DISPOSAL:** Do not flush to drains, sewers or natural bodies of water. If possible, recycle. If recycling is not possible, then contract to authorized disposal service.

## SECTION 14. Transport Information

### 14.1 DOT (US)

Identification Number	U.N. 1993
Proper Shipping Name	Flammable liquids, n.o.s. (Petroleum Distillates, Ethanol)
Hazard Class(es)	3
Packing Group	II
Label(s) Required	FLAMMABLE LIQUID
Resp Guide Page:	128

### 14.2 IMDG (Vessel)

Contact Supplier for shipping requirements



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### 14.3 ICAO/IATA (Air transport) Contact Supplier for shipping requirements

## SECTION 15. Regulatory Information

### CERCLA – SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meeting the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### SARA Section 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS no.
Methanol	67-56-1
4-methyl-2-pentanone	108-10-1

### CALIFORNIA Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

4-methyl-2-pentanone CAS no. 108-10-1

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

Methanol CAS no. 67-56-1

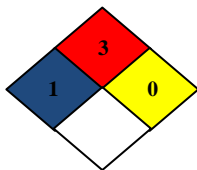
STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable. Consult applicable national, state, provincial or local laws.

## SECTION 16. Other Information

### HMIS Ratings:

Health: 1	Flammability: 3	Reactivity: 0	Personal Protection: X
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### NFPA 704:



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