

SAFETY DATA SHEET

SDS REVISIONS: FORMAT

WARHAWK® 480 EC PCP 29984

DATE OF ISSUE: 02/04/19 SUPERSEDES: 08/09/15

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:

TRADE NAME: WARHAWK® 480 EC

1.2 RECOMMENDED USE: GROUP 1B INSECTICIDE

1.3 MANUFACTURED FOR AND DISTRIBUTED BY:

LOVELAND PRODUCTS CANADA, INC.

789 DONNYBROOK DRIVE • DORCHESTER, ONTARIO NOL 1G5

1.4 24 Hour Emergency Phone: (Chemtrec): 1-800-424-9300 (Toll Free) - Additional Emergency Phone 1-800-561-8273

Loveland Technical Service: 1-800-328-4678

U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Flammable Liquids	Category 3	H226
Acute Toxicity – Oral	Category 3	H301
Acute Toxicity – Inhalation	Category 4	H332
Acute Toxicity – Dermal	Category 4	H312
Specific Target Organ Toxicity (Single Exposure)	Category 3	H335
Aspiration Hazard	Category 1	H304
Eye Damage/Irritation	Category 2B	H320
Sensitization – Skin	Category 1	H317

2.2 Label elements



Signal word:

DANGER

Hazard Statement:

H226 - Flammable liquid and vapour.

H301 – Toxic if swallowed. H332 – Harmful if inhaled.

H312 – Harmful in contact with skin. H335 – May cause respiratory irritation.

H304 – May be fatal if swallowed and enters airways.

H320 - Causes eye irritation.

H317 - May cause an allergic skin reaction.

Precautionary

Statement: P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Prevention): P233 – Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 – Use explosion-proof electrical/ventilating/lighting/equipment.

P242 – Use only non-sparking tools.

P243 – Take precautionary measures against static discharge.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P264 – Wash hands, face and skin thoroughly after handling. P270 – Do not eat, drink or smoke when using this product. P261 – Avoid breathing dust/fume/gas/mist/vapours/spray. P271 – Use only outdoors or in a well-ventilated area.

P272 - Contaminated work clothing must not be allowed out of the workplace.

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Precautionary

Statement: P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. (Response): P321 – Specific treatment (see First Aid and Notes to Physician on the product label).

P330 – Rinse mouth.

P331 - Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313 – If skin irritation or rash occurs: Get medical advice/attention.

P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.

P362 - Take off contaminated clothing and wash it before reuse.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and

easy to do. Continue rinsing.

P337+P313 – If eye irritation persists: Get medical advice/attention.

P303+P361+P353 - IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Precautionary Statement:

(Storage): P403+P235 – Store in a well-ventilated place. Keep cool.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

Precautionary Statement:

(Disposal) P501 – Dispose of contents/container to an approved waste disposal to an approved waste disposal facility.

2.3 Other hazards

None known

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Chemical Name:	CAS No.	Concentration
Chlorpyrifos	2921-88-2	480 g/L 44.90
2-Ethylhexanol	104-76-7	1.00
Solvent naphtha (petroleum), light aromatic consists of:	64742-95-6	48.60
1,2,4-Trimethylbenzene	95-63-6	14.40
1,3,5-Trimethylbenzene	108-67-8	3.80
Cumene	98-82-2	1.90
Xylene	1330-20-7	0.40

(Warning, contains the allergen soy)

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4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5

minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

If Swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.

Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an

unconscious person.

If on Skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or

doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by

mouth-to-mouth, if possible. Call a poison control centre or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Central nervous system effects.

4.3 Immediate Medical Attention and Special Treatment

Treatment: This product contains petroleum distillates.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

Notes to Physician: Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing respiratory and cardiac depression. Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness and tremor in coordination, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). ANTIDOTE: Atropine, only by injection, is the preferable antidote. Administer atropine sulphate in large doses; TWO or FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10-minute intervals until signs of atropinization appear. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. DO NOT GIVE MORPHINE OR TRANQUILIZERS. In cases of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of chlorpyrifos may occur and relapse may occur after initial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.

NOTE: Product contains a petroleum distillate solvent. Vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Foam, carbon dioxide (CO₂), dry chemical, soft stream or water fog.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, smoke may contain the original material in addition to combustion products of varying

composition which may be toxic and/or irritating. Combustion products may include but are not limited to: Oxides of sulfur. Phosphorous compounds. Oxides of nitrogen. Hydrogen chloride. Oxides of

carbon.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving

chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and

deny unnecessary entry.



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6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapour to avoid fire or explosion. Vapour explosion hazard. Keep out of sewers. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions:

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark except as noted on appropriate labels. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are actively visiting the treatment area.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up:

Large Spills: Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress.

Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and

properly labeled containers.
Remove residual contamination.

Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling:

KEEP OUT OF REACH OF CHILDREN AND UNAUTHORIZED PERSONNEL

Fatal if swallowed. May be harmful if inhaled or absorbed through skin. Causes eye irritation. May cause skin irritation. Do not get in eyes, on skin, or on clothing. Do not inhale vapours or spray mist. Handle chemical in a ventilated area. Wear protective clothing and rubber gloves when handling. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking. Remove contaminated clothing and launder separately before reuse. Do not wear contaminated shoes or boots. Keep away from food, feedstuffs, and water supplies.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers:

Keep away from food, drinks, and animal feedstuffs. Keep only in the original container, tightly closed. Do not store near heat or open flame.

Do not contaminate water, food or feed by storage. Store only in original container in secure, dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 38 °C (100 °F) for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

Components	Type	Value	
Chlorpyrifos	TLV	0.1 mg/m³ (Skin)	
		Measured as inhalable fraction and vapour	
1,2,4-Trimethylbenzene	TLV	25 ppm / 123 mg/m ³	
1,3,5-Trimethylbenzene	TLV	25 ppm / 123 mg/m ³	
Cumene	TLV	50 ppm / 245 mg/m ³	
Xylene	TLV	100 ppm / 434 mg/m ³	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
Acetylcholinesterase inhibiting pesticides	70% of individual's baseline	Cholinesterase activity in red blood cells
Xylene		URT & eye irritant; CNS impair



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8.2 EXPOSURE CONTROLS:

Engineering Measures

PRECAUTIONS FOR MIXERS/LOADERS

For liquid formulations packaged in containers more than 10 L Mixers/loaders must use a closed mechanical transfer loading system.

Mixers/loaders must wear:

- coveralls over a long-sleeved shirt and long pants;
- chemical-resistant gloves;
- an air purifying respirator with an -R or -P series filter; and
- socks and shoes.

For liquid formulations packaged in containers holding 10 L or less

Mixers/loaders must wear:

- · coveralls over a long-sleeved shirt and long pants;
- chemical-resistant gloves;
- a chemical-resistant apron;
- · chemical-resistant footwear plus socks; and
- an air purifying respirator equipped with an -R or -P series filter.

PRECAUTIONS FOR APPLICATORS

Do not apply with high-pressure handwand equipment.

Applicators using airblast equipment with a closed cab must wear:

- a long-sleeved shirt and long pants
- socks and shoes
- chemical-resistant gloves when leaving cab for clean-up and repair (gloves must be removed and left outside when re-entering the cab)

Applicators using airblast equipment with an open cab must wear:

- a long-sleeved shirt and long pants
- chemical-resistant coveralls and head protection
- socks and shoes
- · chemical-resistant gloves
- an air purifying respirator with an -R or -P series filter

Applicators using ground application equipment with a closed cab must wear:

- a long-sleeved shirt and long pants;
- chemical-resistant gloves when leaving cab for clean-up and repair (gloves must be removed and left outside when re-entering the cab); and
- socks and shoes.

Applicators using ground application equipment with an open cab must wear:

- coveralls over a long-sleeved shirt and long pants;
- chemical-resistant gloves; and
- socks and shoes.

Applicators using aerial application equipment must use enclosed cockpits and must

wear:

- a long-sleeved shirt and long pants; and
- socks and shoes.

Applicators using handheld equipment must wear:

- a long-sleeved shirt and long pants;
- chemical-resistant coveralls and head protection (if spray is upwardly directed);
- chemical-resistant footwear and socks;
- chemical-resistant gloves; and an air purifying respirator with an -R or -P series filter.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long-sleeved shirt and long pants. Shoes plus socks. Chemical-resistant gloves, except for pilots. Chemical-resistant

apron for mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment. Wear respiratory

protection during operations where spraying or misting occurs. Wear NIOSH-certified air-purifying respiratory protection with an N, P or R95 or HE class filter and organic vapour cartridge if necessary. Wear air supplied respiratory protection if exposure concentrations are unknown or if air-purifying respirators may not provide adequate

protection.



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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE: Liquid

ODOUR: Aromatic.

ODOUR THRESHOLD: No data available.

COLOUR: Red. pH: 4.3

MELTING POINT / FREEZING POINT: No data available

BOILING POINT: 143 °C / 289 °F FLASH POINT: 106 °F / 41 °C (TCC). FLAMMABILITY (solid, gas): No data available.

UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Upper explosion limit: 6% vol. Lower explosion limit: 1% vol.

VAPOUR PRESSURE: No data available. SOLUBILITY: Emulsifies.

PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.

AUTO-IGNITION TEMPERATURE: No data available. DECOMPOSITION TEMPERATURE: No data available. VISCOSITY [Dynamic]: 3.2 mPa @ 20°C / 68°F.

SPECIFIC GRÁVITY (Water = 1): 1.07 g/ml DENSITY: 1.07 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Unstable at elevated temperatures.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Will not polymerize.

10.4 CONDITIONS TO AVOID

Avoid temperatures above 70°C (158°F). Chlorpyrifos decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure buildup in closed systems.

10.5 INCOMPATIBILE MATERIALS

Strong oxidizers. Avoid contact with bases and strong acids.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Decomposition products may be formed in a fire situation: hydrogen chloride, organic sulfides, sulfur dioxide. Incomplete combustion may lead to formation of oxides of carbon and/or other asphyxiants.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Eye contact. Skin absorption. Skin contact.

LC₅₀ (rat): >2.00 mg/L (4 HR) estimated. LD₅₀ Oral (rat): Estimated: 300 mg/kg LD₅₀ Dermal (rabbit): > 1,000 mg/kg Acute Toxicity Estimates: No data available Skin Irritation (rabbit): May cause moderate irritation. Eye Irritation (rabbit): Moderate eye irritation.

Specific Target Organ Toxicity: Skin, Central Nervous System, Liver, Kidneys.

Aspiration: Vomiting may cause aspiration pneumonia.

Skin Sensitization (guinea pig): Sensitizer

Carcinogenicity: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen)

Germ Cell Mutagenicity: Minimal genetic toxicity potential.

Interactive Effects: None known.



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12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product is toxic to fish, aquatic invertebrates, small mammals and birds. Information below is based on the active ingredient Chlorpyrifos. **Ecotoxicological Data**

 Species
 Test Results

 Chlorpyrifos
 Rainbow trout
 0.003 mg/L – 96-hour LC₅₀

 Daphnia magna
 0.00068 mg/L – 48-hour EC₅₀

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Below detectable levels under aerobic aquatic conditions.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Bioconcentration potential is moderate (BCF Log Pow between 3 and 5).

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Recyclable Containers:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Returnable Containers:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer). For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Returnable-Refillable Containers:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

TDG Shipping Description: UN3017, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (CHLORPYRIFOS, AROMATIC NAPHTHA), 6.1(3), III MARINE POLLUTANT

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings: NFPA HMIS

Health 0 Least Health Flammability Flammability 1 Slight 2 Instability Moderate Reactivity 3 High G PPE

4 Severe



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SARA Hazard Notification/Reporting SARA Title III Hazard Category:

Immediate Delayed <u>Y</u> _Y __Y_ __N__

Sudden Release of Pressure

<u>N___</u>

Reportable Quantity (RQ) under U.S. CERCLA: Chlorpyrifos (CAS: 2921-88-2) 1 pound; Xylene (mixed isomers) (CAS: 1330-20-7) 100 pounds; Cumene (CAS: 98-82-8) 5000 pounds SARA, Title III, Section 313: 1,2,4-Trimethylbenzene (CAS: 95-63-6) 14.4%; Xylene (mixed isomers) (CAS: 1330-20-7) <1.5% maximum; Cumene (CAS: 98-82-8) 1.9% maximum. RCRA Waste Code: U239 (Xylene [mixed isomers]); U055 (Cumene).

Fire

Reactive

CA Proposition 65: Not applicable

WHMIS [Canada]: Pest control products are not controlled under WHMIS. Classified D2B

OPAC Schedule 3

Read the approved label, authorized under the Pest Control Products Act, prior to handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labeling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label.



DANGER

POISON

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Product Stewardship and Regulatory Affairs

PCP (Pest Control Products Act) Registration No. 29984

REVIEWED BY: Safety, Health and Environment

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