



# CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 18/12/2017

Revision date: 22/05/2018

Supersedes: 18/12/2017

Version: 1.1

ULM-7489-S

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name : CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE  
Product code : ULM-7489-S

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

|                           |      |
|---------------------------|------|
| Flam. Liq. 3              | H226 |
| Acute Tox. 4 (Inhalation) | H332 |
| Skin Irrit. 2             | H315 |
| Eye Irrit. 2              | H319 |
| STOT SE 3                 | H336 |
| Asp. Tox. 1               | H304 |

Full text of hazard classes and H-statements : see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

R10  
Xn; R20  
Xn; R65  
Xi; R36/38  
R67

Full text of R-phrases: see section 16

#### GHS-US classification

|                           |      |
|---------------------------|------|
| Flam. Liq. 3              | H226 |
| Acute Tox. 4 (Inhalation) | H332 |
| Skin Irrit. 2             | H315 |
| Eye Irrit. 2A             | H319 |
| STOT SE 3                 | H336 |
| Asp. Tox. 1               | H304 |

Full text of H statements : see section 16

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### Adverse physicochemical, human health and environmental effects

Central Nervous System. Flammable liquid and vapor. May cause drowsiness or dizziness. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May be fatal if swallowed and enters airways.

## 2.2. Label elements

### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H226 - Flammable liquid and vapor  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing fume, mist, spray, vapors  
P264 - Wash hands, forearms and face thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection, face protection, protective clothing, protective gloves

### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapor  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US)

: P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P261 - Avoid breathing fume, mist, spray, vapors  
P264 - Wash hands, forearms and face thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER  
P302+P352 - If on skin: Wash with plenty of water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a doctor, a POISON CENTER if you feel unwell  
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)  
P331 - Do NOT induce vomiting  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash it before reuse

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P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), dry extinguishing powder to extinguish  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                   | Product identifier  | %      | Classification according to Directive 67/548/EEC |
|------------------------|---|--------|--|
| N-NONANE UNLABELED     | (CAS No) 111-84-2<br>(EC No) 203-913-4                                | 99.986 | R10<br>Xn; R20<br>Xn; R65<br>Xi; R36/38<br>R67   |
| CHLORPYRIFOS UNLABELED | (CAS No) 2921-88-2<br>(EC No) 220-864-4<br>(EC Index No) 015-084-00-4 | 0.014  | T; R25<br>N; R50/53                              |

| Name                   | Product identifier  | %      | Classification according to Regulation (EC) No. 1272/2008 [CLP]  |
|------------------------|---|--------|--|
| N-NONANE UNLABELED     | (CAS No) 111-84-2<br>(EC No) 203-913-4                                | 99.986 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>Asp. Tox. 1, H304 |
| CHLORPYRIFOS UNLABELED | (CAS No) 2921-88-2<br>(EC No) 220-864-4<br>(EC Index No) 015-084-00-4 | 0.014  | Acute Tox. 3 (Oral), H301<br>Aquatic Acute 1, H400 (M=10000)<br>Aquatic Chronic 1, H410  |

| Name                   | Product identifier | %      | GHS-US classification  |
|------------------------|--------------------|--------|--|
| N-NONANE UNLABELED     | (CAS No) 111-84-2  | 99.986 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>Asp. Tox. 1, H304 |
| CHLORPYRIFOS UNLABELED | (CAS No) 2921-88-2 | 0.014  | Acute Tox. 3 (Oral), H301<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410  |

Full text of R- and H- phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Call a physician immediately.  |
| First-aid measures after inhalation   | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.                              |
| First-aid measures after skin contact | : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.                                  |
| First-aid measures after eye contact  | : 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. |
| First-aid measures after ingestion    | : Do not induce vomiting. Call a physician immediately.  |

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

|                                      |   |
|--------------------------------------|---|
| Symptoms/injuries                    | : May cause drowsiness or dizziness.                                |
| Symptoms/injuries after inhalation   | : Harmful if inhaled. May cause respiratory irritation.             |
| Symptoms/injuries after skin contact | : Causes skin irritation. May be harmful in contact with skin.      |
| Symptoms/injuries after eye contact  | : Causes serious eye irritation.                                    |
| Symptoms/injuries after ingestion    | : May be fatal if swallowed and enters airways. Risk of lung edema. |

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Alcohol resistant foam.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor.  
Explosion hazard : May form flammable/explosive vapor-air mixture.  
Reactivity : Flammable liquid and vapor. vapors may form flammable mixture with air.

### 5.3. Advice for firefighters

Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Wear personal protective equipment. Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Dike and contain spill. Dispose as hazardous waste. Comply with local regulations for disposal.  
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.  
Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature away from light and moisture.  
Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |                 |  |
|--|-----------------|--|
| Italy - Portugal - USA ACGIH               | ACGIH TWA (ppm) | 200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV) |
| Italy - Portugal - USA ACGIH               | Remark (ACGIH)  | CNS impair   |

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| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |   |  |
|--|---|--|
| USA NIOSH                                  | NIOSH REL (TWA) (mg/m <sup>3</sup> )    | 1050 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits                        |
| USA NIOSH                                  | NIOSH REL (TWA) (ppm)                   | 200 ppm USA. NIOSH Recommended Exposure Limits                                       |
| USA NIOSH                                  | Remark (NIOSH)                          | Central Nervous System impairment  |
| USA OSHA                                   | OSHA PEL (TWA) (mg/m <sup>3</sup> )     | 1050 mg/m <sup>3</sup> USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000 |
| USA OSHA                                   | OSHA PEL (TWA) (ppm)                    | 200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000                |
| USA OSHA                                   | OSHA PEL (Ceiling) (mg/m <sup>3</sup> ) | 1050 California permissible exposure limits for chemical contaminants.               |
| USA OSHA                                   | OSHA PEL (Ceiling) (ppm)                | 200 ppm California permissible exposure limits for chemical contaminants.            |

| N-NONANE UNLABELED (111-84-2) |   |  |
|-------------------------------|---|--|
| Italy - Portugal - USA ACGIH  | ACGIH TWA (ppm)                         | 200.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)                             |
| Italy - Portugal - USA ACGIH  | Remark (ACGIH)                          | CNS impair   |
| USA NIOSH                     | NIOSH REL (TWA) (mg/m <sup>3</sup> )    | 1050 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits                        |
| USA NIOSH                     | NIOSH REL (TWA) (ppm)                   | 200 ppm USA. NIOSH Recommended Exposure Limits                                       |
| USA NIOSH                     | Remark (NIOSH)                          | Central Nervous System impairment  |
| USA OSHA                      | OSHA PEL (TWA) (mg/m <sup>3</sup> )     | 1050 mg/m <sup>3</sup> USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000 |
| USA OSHA                      | OSHA PEL (TWA) (ppm)                    | 200 ppm USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000                |
| USA OSHA                      | OSHA PEL (Ceiling) (mg/m <sup>3</sup> ) | 1050 California permissible exposure limits for chemical contaminants                |
| USA OSHA                      | OSHA PEL (Ceiling) (ppm)                | 200 ppm California permissible exposure limits for chemical contaminants             |

| CHLORPYRIFOS UNLABELED (2921-88-2) |                                       |  |
|------------------------------------|---------------------------------------|--|
| Italy - Portugal - USA ACGIH       | ACGIH TWA (mg/m <sup>3</sup> )        | 0.1 mg/m <sup>3</sup> Cholinesterase inhibition. Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Acetylcholinesterase Inhibiting Pesticide, Not classifiable as a human carcinogen. Danger of subcutaneous absorption. |
| USA NIOSH                          | NIOSH REL (TWA) (mg/m <sup>3</sup> )  | 0.2 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits. Potential for dermal absorption.   |
| USA NIOSH                          | NIOSH REL (STEL) (mg/m <sup>3</sup> ) | 0.6 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits. Potential for dermal absorption.   |
| USA OSHA                           | OSHA PEL (TWA) (mg/m <sup>3</sup> )   | 0.2 mg/m <sup>3</sup> Skin notation  |

### 8.2. Exposure controls

Appropriate engineering controls  
Personal protective equipment

- : Ensure good ventilation of the work station.
- : Protective clothing. Protective goggles. Gloves. Self-contained breathing apparatus.



Materials for protective clothing  
Hand protection  
Eye protection  
Skin and body protection  
Respiratory protection  
Environmental exposure controls

- : Wear suitable protective clothing and gloves.
- : protective gloves.
- : Chemical goggles or face shield. Chemical goggles or safety glasses.
- : Wear suitable protective clothing, gloves and eye/face protection.
- : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Approved respirator.
- : Avoid release to the environment.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

|   |   |
|---|---|
| Physical state                              | : Liquid  |
| Appearance                                  | : Liquid  |
| Molecular mass                              | : 128.3 g/mol   |
| Color                                       | : Colorless   |
| Odor  | : No data available                                   |
| Odor threshold                              | : No data available                                   |
| pH  | : No data available                                   |
| Relative evaporation rate (butyl acetate=1) | : No data available                                   |
| Melting point                               | : Not applicable                                      |
| Freezing point                              | : -53 °C (- 63 °F) - lit                              |
| Boiling point                               | : 151 °C (304 °F) - lit                               |
| Flash point                                 | : 31 °C (87.8 °F) - closed cup                        |
| Auto-ignition temperature                   | : 205 °C (401 °F)                                     |
| Decomposition temperature                   | : No data available                                   |
| Flammability (solid, gas)                   | : Flammable liquid and vapor                          |
| Vapor pressure                              | : 5.69 hPa (4.27 mmHg) at 25 °C (77 °F)               |
| Relative vapor density at 20 °C             | : No data available                                   |
| Relative density                            | : No data available                                   |
| Specific gravity / density                  | : 0.718 g/ml at 25 °C (77 °F)                         |
| Solubility                                  | : Water: 0.0002 % at 25 °C (77 °F) - slightly soluble |
| Log Pow                                     | : 5.65  |
| Log Kow                                     | : No data available                                   |
| Viscosity, kinematic                        | : <= 1.008 mm <sup>2</sup> /s at 20 °C (68 °F)        |
| Viscosity, dynamic                          | : No data available                                   |
| Explosive properties                        | : No data available                                   |
| Oxidizing properties                        | : No data available                                   |
| Explosion limits                            | : 0.87 - 2.9 % (V)                                    |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Flammable liquid and vapor. vapors may form flammable mixture with air.

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>).

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Inhalation: Harmful if inhaled.

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |                                       |
|--|---------------------------------------|
| LC50 inhalation rat (mg/l)                 | 23760 mg/m <sup>3</sup> male - 4 h    |
| ATE CLP (gases)                            | 4500.000 ppmV/4h                      |
| ATE CLP (vapors)                           | 11.000 mg/l/4h                        |
| ATE CLP (dust, mist)                       | 1.500 mg/l/4h                         |
| Skin corrosion/irritation, Dermal, rat     | Result: Skin Irritation (Draize Test) |

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| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |                                   |
|--|-----------------------------------|
| Additional information                     | : S. Typhimurium Result: negative |

| N-NONANE UNLABELED (111-84-2)          |                                       |
|--|---------------------------------------|
| LC50 inhalation rat (mg/l)             | 23760 mg/m <sup>3</sup> male - 4h     |
| ATE CLP (gases)                        | 4500.000 ppmV/4h                      |
| ATE CLP (vapors)                       | 11.000 mg/l/4h                        |
| ATE CLP (dust, mist)                   | 1.500 mg/l/4h                         |
| Skin corrosion/irritation, Dermal, rat | Result: Skin Irritation (Draize Test) |
| Additional information                 | : S. Typhimurium Result: negative     |

| CHLORPYRIFOS UNLABELED (2921-88-2) |                             |
|------------------------------------|-----------------------------|
| LD50 oral rat                      | 82 mg/kg                    |
| LD50 oral                          | 60 mg/kg Mouse              |
| LD50 dermal rat                    | 2000 mg/kg                  |
| LC50 inhalation rat (mg/l)         | > 200 mg/m <sup>3</sup> 4 h |
| ATE CLP (oral)                     | 82.000 mg/kg body weight    |
| ATE CLP (dermal)                   | 2000.000 mg/kg body weight  |

|  |                                      |
|--|--------------------------------------|
| Skin corrosion/irritation                        | : Causes skin irritation.            |
| Serious eye damage/irritation                    | : Causes serious eye irritation.     |
| Respiratory or skin sensitization                | : Not classified                     |
| Germ cell mutagenicity                           | : Not classified                     |
| Carcinogenicity                                  | : Not classified                     |
| Reproductive toxicity                            | : Not classified                     |
| Specific target organ toxicity – single exposure | : May cause drowsiness or dizziness. |

| N-NONANE UNLABELED (111-84-2) |  |
|-------------------------------|--|
| NOAEL (oral,rat)              | 100 mg/kg body weight female (OECD Test Guideline 408) |

|  |                  |
|--|------------------|
| Specific target organ toxicity – repeated exposure | : Not classified |
|--|------------------|

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |   |
|--|---|
| NOAEL (oral,rat,90 days)                   | 100 mg/kg bodyweight/day female (OECD Test Guideline 408) |

|   |   |
|---|---|
| Aspiration hazard                                   | : May be fatal if swallowed and enters airways.   |
| Potential Adverse human health effects and symptoms | : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. |
| Symptoms/injuries after inhalation                  | : Harmful if inhaled. May cause respiratory irritation.   |
| Symptoms/injuries after skin contact                | : Causes skin irritation. May be harmful in contact with skin.  |
| Symptoms/injuries after eye contact                 | : Causes serious eye irritation.  |
| Symptoms/injuries after ingestion                   | : May be fatal if swallowed and enters airways. Risk of lung edema.   |

## SECTION 12: Ecological information

### 12.1. Toxicity

|                   |  |
|-------------------|--|
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
|-------------------|--|

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE |   |
|--|---|
| EC50 Daphnia 1                             | 0.2 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h |

| N-NONANE UNLABELED (111-84-2) |  |
|-------------------------------|--|
| LC50 fish 1                   | 0.2 mg/l Daphnia magna (Water flea) - 48 h |

| CHLORPYRIFOS UNLABELED (2921-88-2) |   |
|------------------------------------|---|
| LC50 fish 1                        | 0.13 mg/l Pimephales promelas (fathead minnow) - 96.0 h                     |
| EC50 Daphnia 1                     | 0.1 µg/l Daphnia magna (Water flea) - 48 h                                  |
| LOEC (acute)                       | 0.15 mg/l mortality - Pimephales promelas (fathead minnow) - 48.0 h         |
| LOEC (chronic)                     | mortality - 0.5 µg/l - Daphnia magna (Water flea) - 48 h                    |
| NOEC (acute)                       | 0.003 mg/l Growth inhibition - Pimephales promelas (fathead minnow) - 7.0 d |
| NOEC (chronic)                     | mortality - 0.1 µg/l - Daphnia magna (Water flea) - 48 h                    |

### 12.2. Persistence and degradability

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### CHLORPYRIFOS UNLABELED (2921-88-2)

Persistence and degradability : Not available. May cause long-term adverse effects in the environment.

#### 12.3. Bioaccumulative potential

### CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE

Log Pow : 5.65  
Bioaccumulative potential : Indication of bioaccumulation.

### N-NONANE UNLABELED (111-84-2)

Log Pow : 5.65  
Bioaccumulative potential : Indication of bioaccumulation.

### CHLORPYRIFOS UNLABELED (2921-88-2)

BCF fish 1 : 0.48 mg/l Pimephales promels (fathead minnow) - 100 d  
Bioconcentration factor (BCF REACH) : 23,000  
Log Pow : 5.27

#### 12.4. Mobility in soil

### CHLORPYRIFOS UNLABELED (2921-88-2)

Ecology - soil : Not available.

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations. Very toxic to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.  
Product/Packaging disposal recommendations: : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No.(DOT) : 1920  
DOT NA no. : UN1920

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Nonanes  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger  
DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.  
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150



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DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
Marine pollutant : No



### 14.3. Additional information

Emergency Response Guide (ERG) Number : 128

Other information : No supplementary information available.

### Overland transport

Packing group (ADR) : III  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Hazard labels (ADR) : 3 - Flammable liquids



Orange plates :



Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 5l  
EAC : 3Y  
Excepted quantities (ADR) : E1

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
MFAG-No : 128

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
Civil Aeronautics Law : Flammable liquids

### 14.4. Environmental hazards

Marine pollutant :



Other information : IMDG only  
: No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE         |  |
|--|--|
| EPA TSCA Regulatory Flag                           | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA. |
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporting requirements of the United States SARA Section 302.           |
| SARA Section 311/312 Hazard Classes                | Fire hazard<br>Immediate (acute) health hazard   |
| SARA Section 313 - Emission Reporting              | Not subject to reporting requirements of the United States SARA Section 313.           |

| N-NONANE UNLABELED (111-84-2)   |  |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |  |
| EPA TSCA Regulatory Flag  | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA. |
| SARA Section 302 Threshold Planning Quantity (TPQ)                        | Not subject to reporting requirements of the United States SARA Section 302.           |
| SARA Section 311/312 Hazard Classes                                       | Fire hazard<br>Immediate (acute) health hazard   |
| SARA Section 313 - Emission Reporting                                     | Not subject to reporting requirements of the United States SARA Section 313.           |

| CHLORPYRIFOS UNLABELED (2921-88-2)                 |   |
|--|---|
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporting requirements of the United States SARA Section 302 |
| SARA Section 311/312 Hazard Classes                | Immediate (acute) health hazard<br>Delayed (chronic) health hazard          |
| SARA Section 313 - Emission Reporting              | Not subject to reporting requirements of the United States SARA Section 313 |

### 15.2. International regulations

#### CANADA

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE            |  |
|---|--|
| Listed on the Canadian DSL (Domestic Substances List) |  |
| N-NONANE UNLABELED (111-84-2)                         |  |
| Listed on the Canadian DSL (Domestic Substances List) |  |

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

| CHLORPYRIFOS UNLABELED 100 UG/ML IN NONANE                          |  |
|---|--|
| U.S. - California - Proposition 65 - Carcinogens List               | No   |
| U.S. - California - Proposition 65 - Developmental Toxicity         | No   |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No   |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male   | No   |
| State or local regulations  | U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Massachusetts - Right To Know List<br>U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances |

| N-NONANE UNLABELED (111-84-2)                         |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No  | No  | No  | No  |                                  |

| CHLORPYRIFOS UNLABELED (2921-88-2)                    |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No  | Yes   | No  | No  |                                  |

| N-NONANE UNLABELED (111-84-2)   |  |
|---|--|
| State or local regulations  |  |
| U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations<br>U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List |  |

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### N-NONANE UNLABELED (111-84-2)

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) List

### CHLORPYRIFOS UNLABELED (2921-88-2)

#### State or local regulations

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

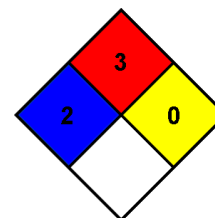
Full text of R-, H- and EUH-phrases:

|                           |   |
|---------------------------|---|
| Acute Tox. 3 (Oral)       | Acute toxicity (oral) Category 3  |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhalation) Category 4  |
| Aquatic Acute 1           | Hazardous to the aquatic environment - Acute Hazard Category 1                                  |
| Aquatic Chronic 1         | Hazardous to the aquatic environment - Chronic Hazard Category 1                                |
| Asp. Tox. 1               | Aspiration hazard Category 1  |
| Eye Irrit. 2              | Serious eye damage/eye irritation Category 2  |
| Flam. Liq. 3              | Flammable liquids Category 3  |
| Skin Irrit. 2             | Skin corrosion/irritation Category 2  |
| STOT SE 3                 | Specific target organ toxicity (single exposure) Category 3                                     |
| H226                      | Flammable liquid and vapor  |
| H301                      | Toxic if swallowed  |
| H304                      | May be fatal if swallowed and enters airways  |
| H315                      | Causes skin irritation  |
| H319                      | Causes serious eye irritation   |
| H332                      | Harmful if inhaled  |
| H336                      | May cause drowsiness or dizziness   |
| H400                      | Very toxic to aquatic life  |
| H410                      | Very toxic to aquatic life with long lasting effects  |
| R10                       | Flammable   |
| R20                       | Harmful by inhalation   |
| R25                       | Toxic if swallowed  |
| R36/38                    | Irritating to eyes and skin   |
| R50/53                    | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R65                       | Harmful: may cause lung damage if swallowed   |
| R67                       | Vapors may cause drowsiness and dizziness   |
| N                         | Dangerous for the environment   |
| T                         | Toxic   |
| Xi                        | Irritant  |
| Xn                        | Harmful   |

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 0 Minimal Hazard

CIL Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*