

CLARIVA PN

Date: 3/25/2015
 Replaces: 10/17/2014

1. PRODUCT IDENTIFICATION

Product identifier on label: **CLARIVA PN**
 Product No.: A19824C
 Use: Nematicide
 Manufacturer: Syngenta Crop Protection, LLC
 Post Office Box 18300
 Greensboro NC 27419
 Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Not Applicable
 Signal Word (OSHA): Not Applicable
 Hazard Statements: Not Applicable

Hazard Symbols:

Precautionary Statements: Not Applicable

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | Common Name | CAS Number | Concentration |
|--------------------------|--------------------------|--------------|---------------|
| Glycerin | Glycerin | 56-81-5 | Trade Secret |
| Other ingredients | Other ingredients | Trade Secret | 85.0% |
| Pasteuria Nishizawae Pn1 | Pasteuria Nishizawae Pn1 | Not Assigned | 15.0% |

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-

CLARIVA PN

Date: 3/25/2015
Replaces: 10/17/2014

- 8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Not Applicable

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Not Applicable

CLARIVA PN

Date: 3/25/2015
Replaces: 10/17/2014

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

| Chemical Name | OSHA PEL | ACGIH TLV | Other | Source |
|--------------------------|--|-----------------|-----------------|----------------|
| Glycerin | 15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable) | Not Established | Not Established | Not Applicable |
| Other ingredients | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| Pasteuria Nishizawae Pn1 | Not Established | Not Established | Not Established | Not Applicable |

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use splash-proof chemical goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown to dark brown liquid

Odor: Not Available

Odor Threshold: Not Available

pH: Not Available

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Pasteuria Nishizawae Pn1 Not Available

Vapor Density: Not Available

Relative Density: 1.04 g/ml

CLARIVA PN

Date: 3/25/2015
 Replaces: 10/17/2014

Solubility (ies): Pasteuria Nishizawae Pn1 Not Available
 Partition coefficient: n-octanol/water: Not Available
 Autoignition Temperature: Not Available
 Decomposition Temperature: Not Available
 Viscosity: Not Available
 Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
 Chemical stability: Stable under normal use and storage conditions.
 Possibility of hazardous reactions: Will not occur.
 Conditions to Avoid: None known.
 Incompatible materials: None known.
 Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Not Applicable

Delayed, immediate and chronic effects of exposure: Not Applicable

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

| | | |
|---------------------|--|---|
| Ingestion: | Oral (LD50 Rat) : | > 5000 mg/kg body weight (based on data obtained from similar substance[s]) |
| Dermal: | Dermal (LD50 Rabbit) : | > 2000 mg/kg body weight (based on data obtained from similar substance[s]) |
| Inhalation: | Inhalation (Not available at this time.) : | Not Available |
| Eye Contact: | No adverse effects (applies to the technical material) | |
| Skin Contact: | No adverse effects (applies to the technical material) | |
| Skin Sensitization: | No adverse effects (applies to the technical material) | |

Reproductive/Developmental Effects

Pasteuria Nishizawae Pn1: Not Available

CLARIVA PN

Date: 3/25/2015
 Replaces: 10/17/2014

Chronic/Subchronic Toxicity Studies

Pasteuria Nishizawae Pn1: Not Available

Carcinogenicity

Pasteuria Nishizawae Pn1: Not Available

| Chemical Name | NTP/IARC/OSHA Carcinogen |
|--------------------------|--------------------------|
| Glycerin | No |
| Other ingredients | No |
| Pasteuria Nishizawae Pn1 | No |

Other Toxicity Information

Applies to the Technical Material

Acute Oral Toxicity/Pathogenicity: Not toxic and/or pathogenic to rats when administered by oral gavage in a single dose of 1.6×10^{-9} spores per animal.

Acute Pulmonary Toxicity/Pathogenicity: Not toxic and/or pathogenic to rats when administered by intratracheal instillation in a single dose of 1.6×10^{-8} spores per animal.

Acute Injection Toxicity/Pathogenicity (Intraperitoneal): Not toxic and/or pathogenic to rats when administered intravenously in a single dose of 1.0×10^{-9} spores per animal.

No hypersensitivity incidents, including immediate-type or delayed-type reactions of humans have been reported during research, development testing and production of this or related bacterial materials.

Toxicity of Other Components

Glycerin

Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

Other ingredients

Not Applicable

Target Organs

Active Ingredients

Pasteuria Nishizawae Pn1: Not Available

Inert Ingredients

Glycerin: Skin

Other ingredients: Not Applicable

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Pasteuria Nishizawae Pn1:
 Not Available

Environmental Fate

Pasteuria Nishizawae Pn1:
 Not Available

CLARIVA PN

Date: 3/25/2015

Replaces: 10/17/2014

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated

Comments

Water Transport - International

Not regulated

Air Transport

Not regulated

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Harmful if inhaled. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse.

EPA Registration Number(s):

100-1524

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

CERCLA/SARA 304 Reportable Quantity (RQ):

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

Exempt from TSCA, subject to FIFRA

CLARIVA PN

Date: 3/25/2015

Replaces: 10/17/2014

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

| | |
|---|----------|
| 0 | Minimal |
| 1 | Slight |
| 2 | Moderate |
| 3 | Serious |
| 4 | Extreme |
| * | Chronic |

Syngenta Hazard Category: A

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 6/17/2013

Revision Date: 3/25/2015

Replaces: 10/17/2014

Section(s) Revised: 4, 3, 10

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.