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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 9, 2013

Mr. Richard Smallets, Regulatory Compliance Specialist
PVS-Nolwood Chemicals, Inc.
9000 Hubbell Avenue
Detroit, MI 48228

Subject: Notification Of Minor Label Changes
Product Name: **PVS-Nolwood Sodium Hypochlorite 5.25% Solution**
EPA Registration Number: **62255-20004**
Application Date: December 4, 2012
Application Receipt: December 5, 2012

Dear Mr. Smallets:

This acknowledges receipt of your Notification application, submitted pursuant to the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act ((FIFRA) 3 (c) 9, as amended.

Proposed Notification:

This notification corrects two typographical errors on the Product Label that was submitted on October 12, 2012. The telephone number has been corrected. And the test in the first paragraph of the "Storage And Disposal" statement has been corrected. Additionally, page numbers have been added to the bottom of each page.

General Comments:

Based on a review of the material submitted, the following comment applies. The Notification application is **Acceptable.** A copy of the **accepted** Notification is attached in your File (**EPA Reg. No. 62255-20004**) for future reference.

If you have questions or comments with regard to this Agency Letter, the please contact Killian Swift via email at **Swift.Killian@epa.gov** or by telephone at **703-308-6346.** When you are submitting information or data in response to this Agency Letter, please send a copy of this Agency Letter with your response in order to facilitate processing.

Sincerely yours,

Monisha Harris,
EPA Product Manager 32
Regulatory Management Branch II
Antimicrobials Division (7510P)

2713

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060 Print Form

EPA United States Environmental Protection Agency Washington, DC 20460

☐ Registration ☐ Amendment ☒ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number: 62255-20004

2. EPA Product Manager

3. Proposed Classification: ☐ None ☐ Restricted

4. Company/Product (Name): PVS-NOLWOOD SODIUM HYPOCHLORITE 5.25% SOLUTION

PM#

5. Name and Address of Applicant *(Include ZIP Code)*

PVS-Nolwood Chemicals, Inc.; 9000 Hubbell Avenue; Detroit, MI 48228

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.

☐ Resubmission in response to Agency letter dated _____

☒ Notification - Explain below.

☐ Final printed labels in response to Agency letter dated _____

☐ "Me Too" Application.

☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

This notification corrects two typographical errors on the label submitted on October 12, 2012. The telephone number has been corrected and text in the first paragraph of the Storage and Disposal section has been corrected. Also, page numbers have been added to the bottom of each page on the label.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No		☐ Yes ☒ No		☒ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
* *Certification must be submitted*	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	

3. Location of Net Contents Information: ☒ Label ☒ Container

4. Size(s) Retail Container: Attachment 1

5. Location of Label Directions: ☒ On Label ☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product: ☒ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Richard Smallets	Regulatory Compliance Spe	313-272-0993

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature: Richard Smallets

3. Title: Regulatory Compliance Specialist

4. Typed Name: Richard Smallets

5. Date: 12-04-2012

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

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PVS-NOLWOOD CHEMICALS, INC.

MANUFACTURING AND DISTRIBUTION OF CHEMICAL AND ALLIED PRODUCTS

9000 Hubbell Avenue · Detroit, Michigan 48228 · (313) 272-0993

December 4, 2012

United States Environmental Protection Agency
Office of Pesticide Programs
7505C
Washington DC, 20460

RE: NOTIFICATION OF LABEL CHANGE
EPA ESTABLISHMENT NUMBER 62255-MI-001
EPA REGISTRATION NUMBER 62255-20004
PVS-NOLWOOD SODIUM HYPOCHLORITE 5.25% SOLUTION

To Whom It May Concern:

PVS-Nolwood Chemicals, Inc. submitted a notification of a label change to US EPA for the above referenced pesticide on October 10, 2012. The purpose of the label change was to conform to the guidance in PR Notice 2007-4. The USEPA approved the label on October 24, 2012.

Subsequent to this approval, PVS-Nolwood identified two typographical errors on the label. The first typographical error was that the telephone number under the "Manufactured By" heading was incorrect. The incorrect telephone number read: "313-272-0093." The correct telephone number is: "313-272-0993." This has been corrected on the attached label.

The second typographical error was in the Storage and Disposal section. The first paragraph in this section erroneously read: "**Pesticide Disposal**: Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water." The label has been corrected to read: "**Pesticide Storage**: Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water."

The third change to the label was made to address the comments received via e-mail from Killian Swift. Mr. Swift suggested that page numbers be inserted on the pages of the pesticide label. Page numbers have been added to the attached label.

Enclosed are EPA Form 8570-1 and a corrected label for PVS-Nolwood Sodium Hypochlorite 5.25% Solution.

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PVS-NOLWOOD CHEMICALS, INC.
MANUFACTURING AND DISTRIBUTION OF CHEMICAL AND ALLIED PRODUCTS
9000 Hubbell Avenue · Detroit, Michigan 48228 · (313) 272-0993

If you have any questions or comments, please call me in my office at 313-272-0993 extension 2505 or on my cell phone at 313-218-3097.

Respectfully Submitted,

Richard Smallets

Richard Smallets, PE
Regulatory Compliance Specialist
McWood Warehouse

PVS Nolwood Chemicals, Inc.
9000 Hubbell Avenue
Detroit, MI 48228

Office: 313-272-0993 X 2505
Cell: 313-218-3097
Fax: 313-272-3267
rsmallets@pvschemicals.com

enclosures:
Form 8750-1
Attachment 1: Label
Attachment 2: Section – III Field 4. Size(s) Retail Container

5 8 13

PVS Nolwood Sodium Hypochlorite 5.25% SOLUTION

For Institutional, Industrial and Household Use.

ACTIVE INGREDIENT:

Sodium hypochlorite	**5.25%**
OTHER INGREDIENT:	**94.75%**
TOTAL	**100%**

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID

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 eyes.
- Call a Poison Control Center or doctor for treatment advice.

If on skin or clothing:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a Poison Control Center or doctor for treatment advice.

NOTIFICATION
Date Reviewed: 01-09-13
Reviewed By: Killian Swift

If swallowed:
- Call a Poison Control Center or doctor immediately for treatment advice.
- Have person drink large amounts of water.
- Do not induce vomiting unless told to do so by the Poison Control Center or a doctor.
- Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

EPA ESTABLISHMENT No.
062255-MI-001

EPA Reg. No.
62255-20004

Manufactured by

PVS Nolwood Chemicals, Inc.
9000 Hubbell Ave.
Detroit, MI 48228
(313) 272-0993

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or clothing. Wear safety glasses or goggles and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine feces, etc.) will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

NOTE: This product degrades with age. Use a chlorine test kit and increase dosage, as necessary, to obtain the required level of available chlorine.

STORAGE AND DISPOSAL

Pesticide Storage: Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water.

Pesticide Disposal: Product or Rinsate that cannot be used must be diluted with water before disposal in a sanitary sewer.

Container Handling: (Residential uses only): Refillable container. Refill this container with sodium hypochlorite, only. Do not re-Use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the re-Filler. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate the container vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system.
(For Institutional uses only, non-Refillable container, 5 gallons or less)
Non-Refillable container. Do not re-Use or re-Fill this container. Clean container promptly after emptying. Triple rinse as follows: Fill container ¼ full with water and recap container. Shake container for 10 seconds. Follow Pesticide Disposal instructions for rinsate disposal.

SWIMMING POOL WATER DISINFECTION

For a new pool or spring start-up, super chlorinate with 142 to 284 fl. oz. of this product per 10,000 gallons of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Adjust and maintain pool water pH between 7.2 and 7.6. Adjust and maintain the alkalinity of the pool to between 50 and 100 ppm. To maintain the pool, add manually or by a feeder device 30 fl. oz. of this product per 10,000 gallons of water to yield an available chlorine residual between 0.6 and 1.0 ppm by weight. Stabilized pools should maintain a residual of 1.0 to 1.5 ppm available chlorine. Test the pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and number of swimmers. Every 7 days, or as necessary, super chlorinate the pool with 142 to 284 fl. oz. of this product per 10,000 gallons of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Re-entry into treated pools is prohibited above levels of 4 ppm due to risk of bodily harm. At the end of the swimming pool season or when water is to be drained from the pool, chlorine must be allowed to dissipate from treated pool water before discharge. Do not chlorinate the pool within 24 hours prior to discharge.
WINTERIZING POOLS: While water is still clear and clean, apply 8 fl. oz. of this product per 1,000 gallons of water while filter is running to obtain a 3 ppm available chlorine residual, as determined by a suitable test kit. Cover pool, prepare heater, filter and heater components for winter by following manufacturer's instructions.

SPAS, HOT TUBS, IMMERSION TANKS, ETC.

SPAS/HOT TUBS: Apply 13.5 fl. oz. of this product per 1,000 gallons of water to obtain a free available chlorine concentration of 5 ppm, as determined by a suitable chlorine test kit. Adjust and maintain pool water pH to between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc., may cause foaming or cloudy water as well as reduce the efficiency of the product.
To maintain the water, apply 13.5 fl. oz. of this product per 1,000 gallons of water over the surface to maintain a chlorine concentration of 5 ppm. Re-entry into treated spa is prohibited above levels of 5 ppm due to risk of bodily harm. After each use, shock treat with 43.5 fl. oz. of this product per 1,000 gallons of water to control odor and algae. During extended periods of disuse, add 8 fl. oz. of this product daily per 1,000 gallons of water to maintain a 3 ppm chlorine concentration.
HUBBARD AND IMMERSION TANKS: Add 13.5 fl. oz. of product per 200 gallons of water before patient use to obtain a chlorine residual of 25 ppm, as determined by a suitable test kit. Adjust and maintain water pH to between 7.2 and 7.6. After each use drain the tank. Add 13.5 fl. oz. of this product to a bucket of water and circulate this solution through the agitator of the tank for 15 minutes and then rinse out the solution. Clean tank thoroughly and dry with clean cloths.
HYDROTHERAPY TANKS: Add 3 fl. oz. of this product per 1,000 gallons of water to obtain a chlorine residual of 1 ppm, as determined by a suitable chlorine test kit. Pool should not be entered until the chlorine residual is below 4 ppm. Adjust and maintain the water pH to between 7.2 and 7.6. Operate pool filter continuously. Drain pool weekly, and clean before refilling.

SANITATION OF NONPOROUS FOOD CONTACT SURFACES

RINSE METHOD: A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 3 fl. oz. of this product per 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product per 10 gallons of water to provide approximately 200 ppm available chlorine by weight.
Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment and do not soak equipment overnight.
Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.
IMMERSION METHOD: A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted

periodically to ensure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 3 fl. oz. of this product per 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product per 10 gallons of water to provide approximately 200 ppm available chlorine by weight.
Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment.
Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.
FLOW/PRESSURE METHOD: Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Prepare a volume of 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing this product in a ratio of 5.5 fl. oz. per 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 2 minutes to ensure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitation process if effluent contains less than 50 ppm available chlorine.
CLEAN-IN-PLACE METHOD: Thoroughly clean equipment after use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing this product in a ratio of 5.5 fl. oz. per 10 gallons of water. Pump solution through system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to ensure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitation process if effluent contains less than 50 ppm available chlorine.
SPRAY/FOG METHOD: Preclean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage. Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 5.5 fl. oz. per 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing this product in a ratio of 16.5 fl. oz. per 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces treated with a 600 ppm solution with a 200 ppm available chlorine solution.

SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD: Prepare a 600 ppm solution by thoroughly mixing 16.5 fl. oz. of this product with 10 gallons of water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product with 10 gallons of water. Prior to using equipment, rinse all surfaces with the 200 ppm available chlorine solution. Do not rinse and do not soak equipment overnight.
IMMERSION METHOD: Prepare a 600 ppm solution by thoroughly mixing in an immersion tank 16.5 fl. oz. of this product with 10 gallons of water. Clean equipment in the normal manner. Immerse equipment in the 600 ppm solution for at least 2 minutes. Prepare a 200 ppm sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product with 10 gallons of water. Prior to using equipment, immerse all surfaces in a 200 ppm available chlorine solution. Do not rinse or soak equipment overnight.
SPRAY/FOG METHOD: Preclean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 16.5 fl. oz. per 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product with 10 gallons of water.

SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD: Prepare a sanitizing solution by thoroughly mixing 5.5 fl. oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.
IMMERSION METHOD: Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 5.5 fl. oz. of this product with 10 gallons of water to provide approximately 200 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.
SPRAY/FOG METHOD: Preclean all surfaces after use. Prepare a 200 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 5.5 fl. oz. per 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD: Prepare a disinfection solution by thoroughly mixing 16.5 fl. oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the disinfecting solution, maintaining contact with the solution for at least 10 minutes. Do not rinse equipment with water after treatment and do not soak equipment overnight.
IMMERSION METHOD: Prepare a disinfecting solution by thoroughly mixing, in an immersion tank, 16.5 fl. oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in normal manner. Prior to use, immerse equipment in the disinfecting solution for at least 10 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

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SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES

RINSE METHOD: Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 16.5 fl. oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse with water after treatment and do not soak equipment overnight.
IMMERSION METHOD: Prepare a sanitizing solution by thoroughly mixing 16.5 fl. oz. of this product with 10 gallons of water to provide approximately 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. Do not rinse equipment with water after treatment.
SPRAY/FOG METHOD: After cleaning, sanitize non-food contact surfaces with a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing this product in a ratio of 16.5 fl. oz. per 10 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Prior to using equipment, thoroughly spray or fog all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours.

SEWAGE & WASTEWATER EFFLUENT TREATMENT

The disinfection of sewage must be evaluated by determining that the total number of coliform bacterial and/or fecal coliform bacteria, as determined by the Most Probable Number (MPN) procedure, of the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.
On the average, satisfactory disinfection of secondary wastewater effluent can be obtained when the chlorine residual is 0.5 ppm after 15 minutes contact. Although the chlorine residual is the critical factor in disinfection, the importance of correlating chlorine residual with bacterial kill must be emphasized. The MPN of the effluent, which is directly related to the water quality standards requirements, should be the final and primary standard and the chlorine residual should be considered an operating standard valid only to the extent verified by the coliform quality of the effluent. The following are critical factors affecting wastewater disinfection.
1. Mixing: It is imperative that the product and the wastewater be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the wastewater.
2. Contacting: Upon flash mixing, the flow through the system must be maintained.
3. Dosage/Residual Control: Successful disinfection is extremely dependent on response to fluctuating chlorine demand to maintain a predetermined, desirable chlorine level. Secondary effluent should contain 0.2 to 1.0 ppm chlorine residual after a 15 to 30 minute contact time. A reasonable average of residual chlorine is about 0.5 ppm after 15 minutes of contact time.

SEWAGE & WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL: Apply a 100 to 1,000 ppm available chlorine solution at a location which will allow complete mixing. Prepare this solution by mixing 27 to 270 fl. oz. of this product per 100 gallons of water. Once control is evident, apply a 15 ppm available chlorine solution. Prepare this solution by mixing 8 fl. oz. of this product per 100 gallons of water.
FILTER BEDS: SLIME CONTROL: Remove filter from service, drain to a depth of 1 foot above filter sand, and add 218.5 fl. oz. of this product per 20 sq. ft. evenly over the surface. Wait 30 minutes before draining water to a level that is even with the top of the filter. Wait 4 to 6 hours before completely draining and backwashing filter.

AGRICULTURAL USES

POST-HARVEST PROTECTION: Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per ton of potatoes. Thoroughly mix 3 fl. oz. of this product with 2 gallons of water to obtain a 500 ppm available chlorine.
LEAFCUTTING BEE CELLS & BEE BOARDS: Disinfect leaf cutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes. Allow cells to drain for 2 minutes and dry 4 to 5 hours or until no chlorine odor can be detected. This solution is made by thoroughly mixing 2.75 tsp. of this product per 100 gallons of water. The bee domicile is disinfected by spraying with 0.1 ppm solution until all surfaces are thoroughly wet. Allow the domicile to dry until all chlorine odor has dissipated.
FOOD EGG SANITIZATION: Thoroughly clean all eggs. Thoroughly mix 5.5 fl. oz. of this product per 10 gallons of warm water to produce a 200 ppm available chlorine solution. The sanitized temperature should not exceed 130 F. Spray the warm sanitizer so that the eggs are thoroughly wetted. Allow the eggs to thoroughly dry before casing or breaking. Do not apply a potable water rinse. The solution should not be re-used to sanitize eggs.
FRUIT AND VEGETABLE WASHING: Thoroughly clean all fruits and vegetables in a wash tank. After draining the tank, thoroughly mix 5 fl. oz. of this product in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. Submerge fruit or vegetables for 2 minutes in a second wash tank containing the re-circulating sanitizing solution. Spray vegetables with sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging

AQUACULTURAL USES

FISH PONDS: Remove fish from ponds prior to treatment. Thoroughly mix 281 fl. oz. of this product with 10,000 gallons of water to obtain 10 ppm available chlorine. Add more product to the water if the available chlorine level is below 1 ppm after 5 minutes. Return fish to pond after the available chlorine level reaches zero.
FISH POND EQUIPMENT: Thoroughly clean all equipment prior to treatment. Thoroughly mix 5.5 fl. oz. of this product with 10 gallons of water to obtain a 200 ppm available chlorine. Porous equipment should soak for one hour.
MAINE LOBSTER PONDS: Remove lobsters, seaweed, etc. from ponds prior to treatment. Drain the pond. Thoroughly mix 132 gallons. per 10,000 gallons of water to obtain at least 600 ppm available chlorine. Apply so that all barrows, gates, rock and dam are treated with product. Permit high tide to fill the pond and then close gates. Allow water to stand for 2 to 3 days until the available chlorine level reaches zero. Open gates and allow 2 tidal cycles to flush pond before returning lobsters to pond.

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CONDITIONING LIVE OYSTERS: Thoroughly mix 13.5 fl. oz. of this product with 10,000 gallons of water at 50 to 70 F to obtain 0.5 ppm available chlorine. Expose oysters to this solution for at least 15 minutes, monitoring the available chlorine level so that it does not fall below 0.05 ppm. Repeat entire process if the available chlorine level drops below 0.05 ppm or the temperature falls below 50 F.
CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS: Prepare a solution containing 200 ppm of available chlorine by mixing 5.5 fl. oz. of this product with 10 gallons of water. Pour into drained pond potholes. Repeat if necessary. Do not put desirable fish back into refilled pond until chlorine residual has dropped to 0 ppm, as determined by a test kit.

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product. Thoroughly mix 16.5 fl. oz. of this product to 10 gallons of water to obtain at least 600 ppm available chlorine. Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20 C. Drain system of the sanitizing solution and thoroughly rinse with water. Discard and DO NOT reuse the spent sanitizer. Rinsate must be monitored with a suitable test kit to ensure that no available chlorine remains in the system.
This product is recommended for decontaminating single and multi-patient hemodialysate systems. This product has been shown to be an effective disinfectant (virucide, fungicide, bacteriocide, pseudomonicide) when tested by AOAC and EPA test methods. This product may not totally eliminate all vegetative microorganisms in the hemodialysate delivery systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. This product should be used in a disinfectant program which includes bacteriological monitoring of the hemodialysate delivery system. This product is NOT recommended for use in hemodialysate or reverse osmosis (RO) membranes. Consult the guidelines for hemodialysate systems which are available from the Hepatitis Laboratories, CDC, Phoenix, AZ 85021.

ASPHALT OR WOOD ROOFS AND SIDINGS

To control fungus and mildew, first remove physical soil by brushing and hosing with clean water, and apply a 5,000 ppm available chlorine solution. Mix 13.5 fl. oz. of this product per gallon of water and brush or spray roof or siding. After 30 minutes, rinse by hosing with clean water.

BOAT BOTTOMS

To control slime on boat bottoms, sling a plastic tarp under boat, retaining enough water to cover the fouled bottom area, but not allowing water to enter enclosed area. This envelope should contain approximately 500 gallons of water for a 14 foot boat. Add 49 fl. oz. of this product to this water to obtain a 35 ppm available chlorine concentration. Leave immersed for 8 to 12 hours. Repeat if necessary. Do not discharge the solution until the free chlorine level has dropped to 0 ppm, as determined by a swimming pool test kit.

ARTIFICIAL SAND BEACHES

To sanitize the sand, spray a 500 ppm available chlorine solution containing 13.5 fl. oz. of this product per 10 gallons of water at frequent intervals. Small areas can be sprinkled with a watering can.

(EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS)

PUBLIC SYSTEMS: Mix a ratio of 3 fl. oz. of this product per 100 gallons of water. Begin feeding this solution with a hypo chlorinator until a free available chlorine residual of at least 0.2 ppm and no more than 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency not less than prescribed by the National Primary Drinking Water Regulations. Contact your local Health Department for further details.
INDIVIDUAL SYSTEMS: DUG WELLS: Upon completion of the casing (Lining) wash the interior of the casing (lining) with a 100 ppm available chlorine solution using a stiff brush. This solution can be made by thoroughly mixing 3 fl. oz. of this product into 10 gallons of water. After covering the well, pour the sanitizing solution into the well through both the pipesleeve opening and the pipeline. Wash the exterior of the pump cylinder also with the sanitizing solution. Start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Consult your local Health Department for further details.
INDIVIDUAL WATER SYSTEMS: DRILLED, DRIVEN, & BORED WELLS: Run pump until water is as free from turbidity as possible. Pour a 100 ppm available chlorine sanitizing solution into the well. This solution can be made by thoroughly mixing 3 fl. oz. of this product into 10 gallons of water. Add 5 to 10 gallons of clean, chlorinated water to the well in order to force the sanitizer into the rock formation. Wash the exterior of pump cylinder with the sanitizer. Drop pipeline into well, start pump and pump water until strong odor of chlorine in water is noted. Stop pump and wait at least 24 hours. After 24 hours flush well until all traces of chlorine have been removed from the water. Deep wells with high water levels may necessitate the use of special methods for introduction of the sanitizer into the well. Consult your local Heath Department for further details.
INDIVIDUAL WATER SYSTEMS: FLOWING ARTESIAN WELLS: Artesian wells generally do not require disinfection. If analyses indicate persistent contamination, the well should be disinfected. Consult your local Health Department for further details.
EMERGENCY DISINFECTION: When boiling of water for 1 minute is not practical, water can be made potable by using this product. Prior to the addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified, contaminated water to a clean container and add 22 drops of this product to 20 gallons of water. Allow the treated water to stand for 30 minutes. Properly treated water should have a slight chlorine odor, if not, repeat dosage and allow the water to stand an additional 15 minutes. The treated water can then be made palatable by pouring it between clean containers several times.

PUBLIC WATER SYSTEMS

RESERVOIRS: ALGAE CONTROL: Hypochlorinated streams feeding the reservoir. Suitable feeding points should be selected on each stream at least 50 yards upstream from the points of entry into the reservoir.
MAINS: Thoroughly flush section to be sanitized by discharging from hydrants. Permit a water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator. Stop water flow when chlorine

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residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time. When chlorination is complete, the system must be flushed free of all heavily chlorinated water.
NEW TANKS, BASINS, ETC.: Remove all physical soil from surfaces. Place 54.5 fl. oz. of this product per each 5 cubic feet of working capacity (500 ppm available chlorine). Fill to working capacity and allow to stand for at least 4 hours. Drain and flush with potable water and return to surface.
NEW FILTER SAND: Apply 218 fl. oz. of this product per each 150 to 200 cubic feet of sand. The action of the product dissolving as the water passes through the bed will aid in sanitizing the new sand.
NEW WELLS: Flush the casing with a 50 ppm available chlorine solution of water containing 13.5 fl. oz. of this product for each 100 gallons of water. The solution should be pumped or fed by gravity into the well after thorough mixing with agitation. The well should stand for several hours or overnight under chlorination. It may then be pumped until a representative raw water sample is obtained. Bacterial examination of the water will indicate whether further treatment is necessary.
EXISTING EQUIPMENT: Remove equipment from service, thoroughly clean surfaces of all physical soil. Sanitize by placing 57.5 fl. oz. of this product per each 5 cubic feet capacity (approximately 500 ppm available chlorine). Fill to working capacity and let stand at least 4 hours. Drain and place in service. If the previous treatment is not practical, surface may be sprayed with a solution containing 13.5 fl. oz. of this product for each 5 gallons of water (approximately 1,000 ppm available chlorine). After drying, flush with water and return to service.

EMERGENCY DISINFECTION AFTER FLOODS

WELLS: Thoroughly flush contaminated casing with a 500 ppm available chlorine solution. Prepare this solution by mixing 13.5 fl. oz. of this product with 10 gallons of water. Backwash the well to increase yield and reduce turbidity, adding sufficient chlorinating solution to the backwash to produce a 10 ppm available chlorine residual, as determined by a chlorine test kit. After the turbidity has been reduced and the casing has been treated, add sufficient chlorinating solution to produce a 50 ppm available chlorine residual. Agitate the well water for several hours and take a representative water sample. Retreat well if water samples are biologically unacceptable.
RESERVOIRS: In case of contamination by overflowing streams, establish hypochlorinating stations upstream of the reservoir. Chlorinate the inlet water until the entire reservoir obtains a 0.2 ppm available chlorine residual, as determined by a suitable chlorine test kit. In case of contamination from surface drainage, apply sufficient product directly to the reservoir to obtain a 0.2 ppm available chlorine residual in all parts of the reservoir.
BASINS, TANKS, FLUMES, ETC.: Thoroughly clean all equipment, then apply 54.5 fl. oz. of this product per 5 cubic feet of water to obtain a 500 ppm available chlorine, as determined by a suitable test kit. After 24 hours drain, flush, and return to service. If the previous method is not suitable, spray or flush the equipment with a solution containing 13.5 fl. oz. of this product for each 5 gallons of water (1,000 ppm available chlorine). Allow to stand for 2 to 4 hours, flush and return to service.
FILTERS: When the sand filter needs replacement, apply 218.5 fl. oz. of this product for each 150 to 200 cubic feet of sand. When the filter is severely contaminated, additional product should be distributed over the surface at the rate of 218.5 fl. oz. per each 20 sq. ft. of sand. Water should stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours. When the filter beds can be backwashed of mud and silt, apply 218.5 fl. oz. of this product per each 50 sq. ft., allowing water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the filter. After 4 to 6 hours drain, and proceed with normal backwashing.
DISTRIBUTION SYSTEM: Flush repaired or replaced section with water. Establish a hypochlorinating station and apply sufficient product until a consistent available chlorine residual of at least 10 ppm remains after a 24 hour retention time. Use a chlorine test kit.
CROSS CONNECTIONS OR EMERGENCY CONNECTIONS: Hypochlorination or gravity feed equipment should be set up near the intake of the untreated water supply. Apply sufficient product to give a chlorine residual of at least 0.1 to 0.2 ppm at the point where the untreated supply enters the regular distribution system. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER DROUGHTS

SUPPLEMENTARY WATER SUPPLIES: Gravity or mechanical hypochlorite feeder should be set up on a supplementary line to dose the water to a minimum chlorine residual of 0.2 ppm after a 20 minute contact time. Use a chlorine test kit.
WATER SHIPPED IN BY TANKS, TANK CARS, TRUCKS, ETC.: Thoroughly clean all containers and equipment. Spray a 500 ppm available chlorine solution and rinse with potable water after 5 minutes. This solution is made by mixing 13.5 fl. oz. of this product for each 10 gallons of water. During the filling of the containers, dose with sufficient amounts of this product to provide at least a 0.2 ppm chlorine residual. Use a chlorine test kit.

EMERGENCY DISINFECTION AFTER MAIN BREAKS

MAINS: Before assembly of the repaired section, flush out mud and soil. Permit a water flow of at least 2.5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator. Stop water flow when a chlorine residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time. When chlorination is completed, the system must be flushed free of all heavily chlorinated water.

COOLING TOWER/EVAPORATIVE CONDENSER WATER

SLUG FEED METHOD: Initial Dose: When system is noticeably fouled, apply 142 to 284 fl. oz. per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
SUBSEQUENT DOSE: When microbial control is evident, add 30 fl. oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.
INTERMITTENT FEED METHOD: Initial Dose: When system is noticeably fouled, apply 142 to 284 fl. oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown.
Subsequent Dose: When microbial control is evident, add 30 fl. oz. of this product per 10,000 gallons of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Apply half (or 1/3, 1/4, or 1/5) of this

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initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
CONTINUOUS FEED METHOD: Initial Dose: When system is noticeably fouled, apply 142 to 284 fl. oz. of this product per 10,000 gallons of water to obtain 5 to 10 ppm available chlorine.
Subsequent Dose: Maintain this treatment level by starting a continuous feed of 3 fl. oz. per 1,000 gallons of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

COMMERICAL LAUNDRY SANITIZERS

Wet fabrics or clothes should be spun dry prior to sanitization. Thoroughly mix 5.5 fl. oz. of this product to 10 gallons of water to yield 200 ppm available chlorine. Promptly after mixing the sanitizer, add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent. Test the level of available chlorine, if solution has been allowed to stand. Add more of this product if the available chlorine level has dropped below 200 ppm

HOUSEHOLD LAUNDRY USE

For top loading machines, before adding clothing, mix 6 fl. Oz. (¾ cup) of bleach to 16 gallons of water . For front loading machines, before adding clothing, mix 2.75 fl. oz. (1/3 cup) to 8 gallons of water. Wash and rinse with usual cycles. Do not use on acetate, leather, silk, spandex, wool, mohair or non-fast colors. Check clothing manufacturer's recommendations before using.

FARM PREMISES

Remove all animals, poultry, and feed from premises, conveyances, and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes, and other facilities occupied or traversed by animals or poultry. Empty all troughs, racks, and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. To disinfect, saturate all surfaces with a solution of at least 1,000 ppm available chlorine for a period of 10 minutes. A 1,000 ppm solution can be made by thoroughly mixing 30 fl. oz. of this product per 10 gallons of water. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals and poultry, as well as the cleaned forks, shovels and scrapers used for removing littler and manure. Ventilate buildings, conveyances, boats and other closed spaces. Do not house livestock or poultry or employ equipment until chlorine has been dissipated. All treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers must be rinsed with potable water before reuse.

PULP AND PAPER MILL PROCESS WATER SYSTEMS

SLUG FEED METHOD: Initial Dose: When system is noticeably fouled, apply 142 to 284 fl. oz. of this product per 10,000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add 30 fl. oz. of this product per 10,000 gallons in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.
INTERMITTENT FEED METHOD: Initial Dose: When system is noticeably fouled, apply 142 to 284 fl. oz. of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm available chlorine. Apply half (or 1/3, 1/4, or 1/5) of this initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
Subsequent Dose: When microbial control is evident, add 30 fl. oz. of this product per 10,000 gallons in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Apply half (or 1/3, 1/4, or 1/5) of the initial dose when half (or 1/3, 1/4, or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

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PVS-NOLWOOD CHEMICALS, INC.

MANUFACTURING AND DISTRIBUTION OF CHEMICAL AND ALLIED PRODUCTS

9000 Hubbell Avenue · Detroit, Michigan 48228 · (313) 272-0993

Attachment 2: Section – III Field 4. Size(s) Retail Container

PVS-Nolwood Chemicals, Inc.
9000 Hubbell Avenue
Detroit, MI 48228
Company Number 62255
Application for Pesticide Notification Regarding
PVS Nolwood Sodium Hypochlorite 5.25% Solution

Attachment 2: Section – III Field 4. Size(s) Retail Container

Currently marketed container sizes:

- 330 Gallons (2730 pounds net)
- 330 Gallons (2880 pounds net)
- 53 Gallons (480 pounds net)

In addition to those container sizes currently marketed, PVS-Nolwood has the capability to package the product in containers ranging from 25 pound (5 gallon) non-bulk containers to 50,000 pound bulk containers.