



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

EPA Reg.

Number:

74321-2

Date of

Issuance:

OCT 30 2007

Term of Issuance:

Conditional

Name of Pesticide Product:

RE-OX

NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Spicer Randolph LLC  
1216 N 155<sup>th</sup> Street  
Basehor, KS 66007

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

a. Revise the "EPA Registration Number to read, "EPA Reg. No. 74321-2".

Signature of Approving Official:

*Emily Mitchell*  
Emily Mitchell  
Product Manager Team-32  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

Date:

OCT 30 2007

b. The AOAC Germicidal and Detergent Sanitizers Method or AOAC Available Chlorine Germicidal Equivalent Concentration Method data must be submitted as this product falls outside of the range specified in the 1986 Re-registration Standard (see attached efficacy review). The following use sites have been removed from the label until data/citation has been provided to support the claims:

- Disinfection of Drinking Water (Emergency/Public/Individual Systems)
- Emergency Disinfection after Floods (Wells, Reservoirs, Basins, etc.)
- Emergency Disinfection after Fires (for water supplies)
- Emergency Disinfection after Droughts (for water supplies & shipped waters)
- Emergency Disinfection after Main Breaks
- Cooling Tower/Evaporative Condenser Water

3. Submit three (3) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



Emily Mitchell  
Product Manager 32  
Regulatory Branch II  
Antimicrobials Division (7510C)

Enclosures: (Stamped Label and Efficacy Review)

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**RE-Ox<sup>®</sup> Deposit Control Disinfectant**

**Disinfectant, Sanitizer and Cleaner**

<b>Active Ingredient:</b>	
Sodium Hypochlorite .....	0.05%
<b>Other Ingredients</b> .....	<u>99.95%</u>
<b>Total</b> .....	100.00%

**Keep Out of Reach of Children**

EPA Reg. No. 74321-\_\_\_\_ EPA Est. 74321-\_\_\_\_

Net Contents: \_\_\_\_ gallons

**Spicer Randolph LLC**  
1216 N 155th St.  
Basehor, KS 66007

No Precautionary Language Is Required On This Label Due To The Fact That All Routes Of Exposure Have Been Tested At Toxicity Category IV

**ACCEPTED  
with COMMENTS  
EPA Letter Dated:  
OCT 30 2007**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide,  
registered under EPA Reg. No. **74321-2**

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**Physical or Chemical Hazards**

Do not use this product with acids or ammonia.

*(For product packaged in containers 5 gallons or larger.)***Environmental Hazards**

This product 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.

**DIRECTIONS FOR USE**

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

RE-Ox is to be added to water to remove and prevent scales, residues and other deposits from forming in piping, equipment and condensing loops. RE-Ox disinfects pre-cleaned equipment, floors, walls, drains and other hard, non-porous environmental surfaces and is effective as a sanitizing rinse of previously cleaned surfaces. RE-Ox disinfects against gram-negative and gram-positive organisms [pathogens] such as *Salmonella enterica* serovar Choleraesuis (ATCC 10708), *Staphylococcus aureus* (ATCC 6538), *Pseudomonas aeruginosa* (ATCC 15442). RE-Ox is a sanitizing rinse against *Staphylococcus aureus* (ATCC 6538) and *Salmonella enterica* serovar Choleraesuis (ATCC 10708) or similar.

**Free Available Chlorine (FAC) Dilution**

Required FAC (ppm)	Amount of RE-Ox added to 10 gallons of water
20	54 ounces
25	68 ounces
50	1.2 gallon
100	2.5 gallons
200	6.7 gallons
250	10 gallons

**For Use in Non-Potable Process Water**

Add RE-Ox to water to achieve the free available chlorine (FAC) levels as directed above. Verify the FAC levels with a suitable FAC test kit. Clean equipment/surfaces with potable water prior to application of RE-Ox-water solutions.

**Disinfection of Hard, Non-porous Environmental Surfaces:**

Use RE-Ox in homes and other domestic dwelling places, commercial, industrial and institutional establishments such as hospitals and other health-care/medical facilities, schools and other educational facilities, daycare and elder-care facilities, food processing/preparation/storage facilities, airports and other transportation facilities and offices. Use RE-OX to disinfect hard, non-porous environmental surfaces such as floors, walls, showers, bathtubs, toilet seats/rims/lids/bases, sinks, fixtures, cabinets, counters, countertops, door knobs, telephones, tables, chairs, etc. which are those made of stainless steel, chrome, glass, vinyl, glazed porcelain, non-porous plastics, enamel and glazed tile.

Prior to disinfection, thoroughly clean all surfaces/objects making sure to remove all gross filth or heavy soil. To disinfect surfaces/objects, use this product as is (no dilution required) and apply by sponge, mop or spray making sure to thoroughly wet all surfaces/objects. Allow RE-Ox to remain on surfaces/objects for 5 minute prior to wiping with a clean cloth or paper towel, or simply allow surfaces/objects to air dry. Alternatively, RE-Ox can be diluted 1:2 with water and used in the same manner but with 10 minutes of contact time.

### Sanitization of Food-Contact Surfaces

Use RE-Ox in public eating establishments (such as restaurants, cafeterias, bars, taverns), dairies and food processing plants to sanitize hard, non-porous food contact surfaces as identified below. Use a mop, sponge, cloth, low pressure coarse sprayer or hand-pump trigger sprayer to apply RE-Ox.

Prior to application, remove all gross food particles and soil from surfaces that are to be sanitized, by a pre-flush, pre-soak or pre-scrape and when necessary, pre-soak treatment. Thoroughly wash or flush surfaces with a good detergent followed by a potable water rinse before applying this product.

To sanitize fixed items such as tanks, finished wood or plastic chopping blocks, food process equipment (grinders, slicers, choppers), food work areas, finished wood or plastic tables, appliances and countertops, thoroughly wet surfaces and allow items to remain wet for at least one minute. Allow surfaces to drain wet and air dry. Do not rinse or wipe treated surfaces/objects.

To sanitize mobile items such as drinking glasses, cookware, dishware and eating utensils, completely immerse items in RE-OX for at least one minute or longer if specified by local government sanitary code. Place sanitized items on a rack or drain board to air dry. Do not rinse or wipe.

To sanitize food contact surfaces in public eating establishments, dairy-processing equipment and food-processing equipment and utensils regulated under 40 CFR § 180.940, completely immerse articles in RE-Ox for at least one minute. Remove immersed items from solution to drain and then let air dry. Thoroughly wet articles too large for immersion by rinsing, spraying or swabbing and allow to drain, then air dry.

### Egg Sanitization

Thoroughly clean all eggs. Spray a warm (not over 130°F) 250 ppm FAC solution to thoroughly wet eggs. Allow the eggs to dry before casing or breaking. Do not rinse eggs with potable water. Do not reuse solution to sanitize eggs.

### Fruit and Vegetable Washing

Thoroughly clean all fruits and vegetables in a wash tank. In a second recirculating wash tank, prepare a solution of 25 ppm FAC. Submerge fruit and/or vegetables for 2 minutes in the second tank. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with RE-OX-treated potable water only prior to packaging.

### Sanitization of Non-Porous Food Contact Surfaces:

**Rinse Method:** Rinse with a 100 ppm FAC (1:4 dilution of product) solution of RE-Ox. Confirm FAC with on-site chlorine test. Allow solution to contact surfaces for at least one minute. Test, and periodically adjust the FAC content as necessary, to ensure that the FAC does not fall below 50 ppm. Do not soak overnight and do not rinse treated surfaces.

**Immersion Method:** Immerse equipment with a 100 ppm FAC (1:4 dilution of product) solution of RE-Ox. Confirm FAC with on-site chlorine test. Allow solution to contact surfaces for at least one minute. Test, and periodically adjust the FAC content as necessary, to ensure that the FAC does not fall below 50 ppm. Do not soak overnight and do not rinse treated surfaces. Do not rinse surfaces; allow solution to drain and air dry.

**Flow/Pressure Method:** Disassemble, clean and reassemble equipment prior to sanitization. Pump a solution containing 100 ppm FAC (1:4 dilution of product) solution of RE-Ox. Confirm FAC with on-site chlorine test. Allow solution to contact surfaces for at least one minute. Test, and periodically adjust the FAC content as necessary, to ensure that the FAC does not fall below 50 ppm until full flow is achieved at all extremities, the system is completely filled with sanitizing solution and all air is removed from the system. Close drain valves and hold under pressure for at least one minute to ensure contact with all internal surfaces. Test solution from drain valve; if effluent contains less than 50 ppm, repeat entire cleaning/sanitizing process.

**Clean in Place Method:** Clean equipment after use and prior to sanitization. Pump a solution containing 100 ppm FAC (1:4 dilution of product) solution of RE-Ox. Confirm FAC with on-site chlorine test. Allow solution to contact surfaces for at least one minute. Test, and periodically adjust the FAC content as necessary, to ensure that the FAC does not fall below 50 ppm.

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until full flow is achieved at all extremities, the system is completely filled with sanitizing solution and all air is removed from the system. Close drain valves and hold under pressure for at least one minute to ensure contact with all internal surfaces. Test solution from drain valve; if effluent contains less than 50 ppm, repeat entire cleaning/sanitizing process.

**Spray/Fog Method:** Pre-clean all surfaces after use and prior to sanitization. Thoroughly spray or fog all surfaces until wet with a 100 ppm FAC solution. Allow surfaces to air dry. Prior to using equipment, rinse all surfaces with a 100 ppm FAC solution. Rinse spray/fog equipment with potable water after sanitization operation.

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**Public Systems:** Mix a ratio of 5.1 oz. of this product to 100 gallons of water. Begin feeding this solution into a hypochlorinator until a free available chlorine residual of at least 0.2 ppm, and no more than 1.6 ppm FAC is obtained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National Primary Drinking Water Regulations. Contact your local Health Department for further details.

**Individual Systems - Pump Wells:** Upon completion of the cleaning (piping) wash the interior of the casing (piping) with a 100 ppm available chlorine solution using a stiff brush. This solution can be made by thoroughly mixing 2 gal. 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 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 - Drilling Driven and Bored Wells:** Run pump until water is as free from turbidity as possible. Pour a 100 ppm FAC sanitizing solution into the well. This solution can be made by thoroughly mixing 2 gal. 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 Health 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 abandoned. 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 addition of the sanitizer, remove all suspended material by filtration or by allowing it to settle to the bottom. Decant the clarified, sedimented water to a clean container and add 1/2 oz. of this product to 20 gallons of water. Allow the treated water to stand for 15 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 for several times.

**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 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.

**New Tanks, Basins, Etc.:** Remove all physical soil from surfaces. Place 32 gal. of this product for each cubic feet of working capacity (500 ppm FAC). Fill to working capacity and allow to stand for at least 4 hours. Drain and flush with potable water and return to service.

**New Filter Sand:** Add 128.5 gal. of this product for 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 FAC solution of water containing 1 gal. 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 under 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 33.75 gal. of this product for every cubic foot of water (approximately 50 gal. per available chlorine). Fill to working capacity and let stand at least 4 hours. Drain and place in service. After drying, flush with water and return to service.

**Wells:** Thoroughly flush contaminated casing with a 250 ppm FAC solution. Prepare this solution by mixing 10 gal. 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 FAC 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 FAC 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 FAC 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 32 gal. of product per 5 cubic feet of water to obtain 500 ppm available chlorine, as determined by a suitable test kit. After 24 hours, drain, flush, and return to service. Allow to stand for 2 to 4 hours, flush and return to service.

**Filters:** When the sand filter needs replacement, apply 128 gal. of this product for each 150 to 200 cubic feet of sand. When the filter is severely contaminated, distribute additional product over the surface at the rate of 20 oz. per 20 sq. ft. Water should stand at a depth of 1 foot above the surface if the filter bed for 2 to 24 hours. When filter beds can be backwashed of mud and silt, apply 128 gal. of this product per each 50 sq. ft., allowing the water to stand at a depth of 1 foot above the filter sand. After 30 minutes, drain water to the level of the sand. 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 1 ppm remains after a 24 hour retention time. Use a chlorine test kit.

**Cross Connections or Emergency Connections:** Set up hypochlorination or gravity feed equipment 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:** Set up gravity or mechanical hypochlorite feeders on a supplementary line to dose the water to a minimum chlorine residual of 0.2 ppm after 20 minutes contact time. Use a chlorine test kit.

**Water Shipping in by Tanks, Tank Cars, Trucks, Etc.:** Thoroughly clean all containers and equipment. Prepare a 500 ppm FAC solution and rinse with potable water after 5 minutes. This solution is made by mixing 10 gal. of this product for each 10 gallons of water. During the filling of the containers, dose with sufficient amount of this product to provide at least a 0.2 ppm FAC 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 100 to 200 gal. of this product per 10,000 gallons of water in the system to obtain a 5 to 10 ppm available chlorine. Repeat until control is achieved. **Subsequent**

**Dose:** When microbial control is evident, add 20 gal. of this product per 10,000 gallons of water in the system daily, or as

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needed to maintain a residual 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 100 to 200 gal 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 20 gal of this product per 10,000 gallons of water in the system to obtain a 1 ppm residual. 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.

**Continuous Feed Method – Initial Dose:** When system is noticeably fouled, apply 100 to 200 gal of this product per 10,000 gallons of water in the system to obtain 5 to 10 ppm FAC residual. **Subsequent Dose:** Maintain this treatment level by starting a continuous feed of 2 gal. of this product 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.

{For product packaged solely for homeowner use:}

**Storage and Disposal**

**Storage:** This product degrades with age. Protect from sunlight. Keep refrigerated or in insulated containers if refrigeration is not available. Store in areas inaccessible to children or pets. Do not store in temperatures greater than 80°F. **Disposal: If empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If partially filled:** Call your local solid waste agent for disposal instructions.

{For product packaged in containers of 1 gallon or less and not solely for homeowner use:}

**Storage and Disposal**

Do not contaminate water, food or feed by storage or disposal.

**Storage:** This product degrades with age. Protect from sunlight. Keep refrigerated or in insulated containers if refrigeration is not available. Do not store in temperatures greater than 80°F. **Disposal: If empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If partially filled:** Call your local solid waste agent of 1-800-CLEANUP for disposal instructions.

{For product packaged in containers greater than 1 gallon:}

**Storage and Disposal**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** This product degrades with age. Protect from sunlight. Keep refrigerated or in insulated containers if refrigeration is not available. Do not store in temperatures greater than 80°F. **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Triple rinse, or equivalent, then offer for recycling, return or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration; or if allowed by state and local authorities, by burning (if burned, stay out of smoke).

{ } = optional/alternate language

{ } = language that does not appear on the market label