TOLCIDE® PS50AS
INDUSTRIAL ANTIMICROBIAL

ACTIVE INGREDIENT:
Tetrakis(hydroxymethyl) phosphonium sulfate........................................... 50%
OTHER INGREDIENTS.................................................. 50%
TOTAL: ........................................................................ 100%
EPA Reg. No. 4564-17 EPA Est. 80347-TX-1

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 eye. • Call a poison control center or doctor for treatment advice.
If swallowed: • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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 a poison control center for further 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information call the National Pesticide Information Center at 1-800-858-7378, 7:30 AM to 3:30 PM, Pacific time (PT), Mon.-Fri. During other times, call the poison control center at 1-800-222-1222.

Note to physicians: Probable mucosal damage may contraindicate the use of gastric lavage.

In case of emergency, call CHEMTREC at 1-800-424-9300

Manufactured for:
SOLVAY asking more from chemistry
SOLVAY USA INC.
8 Cedar Brook Drive • CN 7500
Crabury, NJ 08512-7500 • 609-860-4000
Active ingredient produced in United Kingdom and/or China

NET CONTENTS: 270 Gallons
TOLCIDE® is a registered trademark of Rhodia UK Limited

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS AND DOMESTIC ANIMALS
DANGER: Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing vapor or spray. Wear long-sleeved shirt and pants or coveralls, goggles or face shield and chemical-resistant gloves when handling. 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.

ENVIRONMENTAL HAZARDS
This product is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a NationalPollutant 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.

STORAGE AND DISPOSAL
Do not contaminate water, food or feed by storage or disposal.
STORAGE: Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. In case of spill, flush the area with large quantities of water.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinseate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING AND DISPOSAL: Nonrefillable container [5 gallons or less]. Do not reuse or refill this container. Offer for recycling or reconditioning if appropriate. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¾ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

CONTAINER HANDLING AND DISPOSAL: Nonrefillable container [greater than 5 gallons]. Do not reuse or refill this container. Offer for recycling or reconditioning if appropriate. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¾ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

CONTAINER HANDLING AND DISPOSAL: Refillable container. Refill this container with THPS only. Do not reuse this container for any other purpose. Pressure rinse the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. Pressure rinse the container for final disposal as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.
DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Not for use in paint.

INDUSTRIAL AND COMMERCIAL RECYCLING COOLING WATER SYSTEMS (for control of bacteria, fungi, and algae) [Not for Use in California]

Note: For cooling water systems of equal or greater than 4000 gallons, do not apply by opening point of liquid to cooling water systems, a metering pump delivery system is required for this use and application method.

Initial Dose Rate: Add 0.5 ppm of TOCLED® PSSA5 (20-50 ppm THP) or continuously 60-70 ppm of TOCLED® PSSA5 (14-19 ppm THP) per day.

Dosing must be directed prior to treatment.

HEAT EXCHANGE SYSTEMS (crucial for condensers, deaerators, evaporative condensers, and boiling water systems) [Not for Use in California]

Add TOCLED® PSSA5 at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

SERVICE WATER AND AUXILIARY SYSTEMS (for use in California)

TOCLED® PSSA5 should be added to service water and auxiliary systems at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

AIR WASHER SYSTEMS (or control of bacteria and fungi) [Not for Use in California]

This product may be used in all air washer systems which have mist-lubricating components. Pre-dilute the system with deionized and distilled water to run with fan on for two hours. Flush and check nozzles, manually cleaning as necessary. Add 50-100 ppm of TOCLED® PSSA5 (20-75 ppm THP) as a point where uniform mixing and distribution will occur. Repeat as needed to maintain control.

INDUSTRIAL FRESH WATER SYSTEMS (for use in California)

Do not use in freshwater used in the manufacture of paper and paperboard products that may contact food. TOCLED® PSSA5 contains a fungicide in its active formulation. Avoid in active formulation in holding ponds and in controlling bacteria and fungi in building and processing tanks of industrial freshwater systems supplying water to paper and paper mill, metal mills, and other manufacturing facilities.

Control of algae in industrial fresh water systems, TOCLED® PSSA5 should be added to provide a concentration of 2-20 ppm of product (1-10 ppm of THP). Treatment should be based on the amount of water entering a point or reservoir or leaving the point or reservoir and entering the immediate processing operations. While treatment can be mixed continuously, regular algae testing will provide adequate control.

INDUSTRIAL WASTEWATER SYSTEMS (Wastewater Systems, Wastewater Sludge and Wastewater Holding Tanks) [Not for Use in California]

TOCLED® PSSA5 should be added to a wastewater system or sludge at a convenient point of uniform mixing such as digester. Stud Dosing: Add 0.03 ppm of TOCLED® PSSA5 (0.4-0.5 ppm THP) per 1,000 gallons of wastewater or sludge.

Continuous Dosing: Add 0.1 ppm of TOCLED® PSSA5 (1-20 ppm THP) per 1,000 gallons of wastewater or sludge.

PAPER AND PAPERBOARD MANUFACTURING (for control of bacteria, fungi, and algae)

a) For use as a substitute in the manufacture of paper and paperboard products and adhesives that do not contact food.

b) Additions should be made at a point in the system where mixing action is good, i.e., a mixing chamber or mixer unit. Add them intermittently or continuously depending on system conditions.

TOCLED® PSSA5 (0.4-5.0 ppm THP) based on total liquid volume or an equivalent based on dry weight of paper produced.

Continuous Dosing: Add 0.08-0.15 ppm of TOCLED® PSSA5 (14-49 ppm THP) based on total liquid volume or an equivalent based on dry weight of paper produced.

c) For use as a preservative to retard microbial growth in water-based coatings, starches, pigments and filter slurries. Do not use in paper and paperboard and adhesives that will contact food. [Not for Use in California]

The treatment rate necessary to retard growth of the additive will vary with the extent of contamination of make up water and the length of storage.

Dosing: Apply 0.25-0.5 ppm of TOCLED® PSSA5 (175-350 ppm THP) to the additive is to be preserved based on the total weight of the dried additive.

MACROCILIN CONTROL [for Use in California]

TOCLED® PSSA5 should be added continuously to maintain a level of 20 ppm active ingredient (THP) in the system for a period of at least 96 hours. Initial Dose: When macrolasts are present in the system, apply 0.49 ppm of TOCLED® PSSA5 (20 ppm THP) based on total liquid volume. Continue to add TOCLED® PSSA5 as needed to maintain the 20 ppm active ingredient (THP) level for a period of at least 96 hours.

FIRE PROTECTION SYSTEMS

TOCLED® PSSA5 is effective at controlling microbial growth in water and on pipe surfaces in fire protection systems. Such microbial growth can cause numerous problems, from corrosion to increased corrosion rates and plugging, normally referred to as "biofilm" and "bioaccumulation". TOCLED® PSSA5 also helps to remove free oxygen from the water, thus eliminating a significant element for bacterial growth and an important factor in many corrosion reactions.

TOCLED® PSSA5 should be added to a fire protection system using a chemical metering pump capable of variable pump rates. The TOCLED® PSSA5 should be injected at a point, such as a riser, manifold, or makeup feed water line, where uniform mixing and distribution will occur. Add 150-400 ppm TOCLED® PSSA5 (75-200 ppm THP) depending on severity of microbial contamination in the system. Repeat as needed.

SOLUTIONS / EMULSIONS

No use for in manufacture of paper and paperboard products and adhesives that may come in contact with food. For the preservation of solutions, emulsions, adhesives, and other liquid products, the addition of 0.05% or 0.75% of TOCLED® 5 is effective. Add at a point in the processing system where there will be sufficient time and agitation for good mixing and dispersion. The exact amount of TOCLED® PSSA5 to be added for the preservation of given formulations will depend on the components as well as the local storage time and requirements.

OIL FIELD AND PETROCHEMICAL OPERATIONS

TOCLED® PSSA5 is effective in controlling sulfide reducing bacteria, general aerobic bacteria, including microorganisms that contribute to biodegradation of oil in field recovery, processing and distribution applications and supporting systems such as injection water, water holding tanks, disposal well water, recondition water, and associated pipelines. TOCLED® PSSA5 has been shown to destroy iron sulfide and aqueous iron when used under these conditions, leading to improved filter life and fluids used for drilling and stimulation of oil wells.

Water Floods (not for use in California)

TOCLED® PSSA5 should be added to a water flood system at a point where uniform mixing will occur.

Injection Wells: For a non-biodegradable system, add 0.0025 to 0.005 ppm TOCLED® PSSA5 (0.5-1.5 ppm THP) is effective. At a flowing system, slug dose for 2 hours based on flow rate. Repeat as necessary until control is achieved.

Continuous Treatment: Once control has been achieved, add 0.002 to 0.008 ppm TOCLED® PSSA5 (2.5-7.5 ppm THP) weekly or as needed to maintain control. When used in a flooded system, slug dose for 2 hours based on flow rate.

Continuous Treatment: TOCLED® PSSA5 can be dosed continuously at a level of 0.001 to 0.005 ppm THP.

Oilfield Gas Production and Transmission Pipelines and Systems

TOCLED® PSSA5 should be added at a point in the pipeline where uniform mixing will occur. The application should be conducted to ensure uniformity.

Shut Down: Follow instructions for water flood treatment.

Continuous Flowing: TOCLED® PSSA5 can be dosed continuously at a level of 0.01 to 0.02 ppm THP.

Hydraulic Fracturing (for use in California)

TOCLED® PSSA5 should be added to the first water storage tanks or directly into the well side injection pipelines as the well is being pumped down while adding 0.01 to 0.02 ppm of TOCLED® PSSA5 (0.02-0.04 ppm THP) depending on the degree of bacterial activity in the water.

Drilling Fluids, Packers, Formulations, and Workover Fluids

TOCLED® PSSA5 should be added to these fluids at a point where uniform mixing will occur. Add 0.002 to 0.005 ppm of TOCLED® PSSA5 (0.04-0.1 ppm THP) to a freshly prepared fluid depending on the degree of contamination.

Gas Storage Wells and Systems (Not for Use in California)

Individual injection wells should be treated with TOCLED® PSSA5 at the same application rates, and in the manner as described under Water Floods. Injection wells should be used as necessary to maintain control.

Individual injection wells should be treated with a sufficient quantity of TOCLED® PSSA5 (0.25-0.5 ppm) when used as the water is present in the system. Injections should be repeated as necessary to maintain control.

Well Remediation Operations (not for use in California)

Individual production or injection wells may be bulk treated with TOCLED® PSSA5 in control bacteria and simultaneously dispose of excess sulfide deposits. The TOCLED® PSSA5 will be pumped as well as a solution in water containing 20 to 40% TOCLED® PSSA5 (100-200 THP). The well is slotted for a period of time (at least 6 hours) then put back into operation.

Hydrofracturing

Water used to hydraulic fracturing fluids or chemicals should contain 0.001 to 0.005 ppm TOCLED® PSSA5 (0.02-0.1 ppm THP), depending on water quality and length of time the equipment will remain idle.

Pipeline Pigging and Scouring Operation

Add TOCLED® PSSA5 to a slug of water immediately following the injection into the water volume can be kept to a minimum and contained between the injection and the trailing pig. Subsequent TOCLED® PSSA5 should be added to produce a concentration of 0.01% to 0.1% (0.5-5 ppm THP) in the water at the discharge point or pig trap, depending on the length of the pipeline and the severity of the cleaning.