

THOR

ACTICIDE® LG-F

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

Industrial microbicide for use in recirculating water cooling towers, air washer systems, oil field injection waters, paper slime control, recirculating closed loop water cooling systems, brewery pasteurizer and can warmer systems, ultra filtration units, such as reverse osmosis systems, metal working fluids, adhesives, tackifiers, hydraulic fluids, dispersed pigments, metal cleaning fluids, building materials, polymer latices, paints and coatings, aqueous compositions, and in liquid soaps, cleaners, detergents, carpet shampoos for industrial and household uses and in polishes and waxes which are classified as indoor non-food and non-food applications.

ACTIVE INGREDIENTS:

5-Chloro-2-methyl-4-isothiazolin-3-one	1.11%
2-Methyl-4-isothiazolin-3-one	0.37%
Other Ingredients:	98.52%
Total:	100.0%

KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS
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. *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 by a poison control center or doctor.
IF ON SKIN:	*Take off contaminated clothing. *Rinse skin immediately with plenty of water for 15-20 minutes. *Call a poison control center or doctor for treatment.
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 or doctor for further treatment advice.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Reg. No. 67071-1
Manufactured By:
Thor GmbH
D-67346 Speyer, Germany
Tel. (06232) 6360

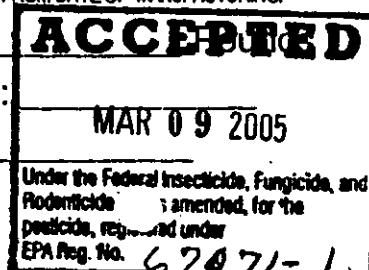
EPA Est. No. 67071-DEU-1
U.S. Office:
Acti-Chem Specialties, Inc.
56 Quarry Road
Trumbull, CT 06611 USA
Tel. (203) 365-6530

NOT FOR SALE OR USE AFTER 12 MONTHS FROM DATE OF MANUFACTURING.

Net Contents: _____

Date of Manufacture: _____

Lot #: _____



CAUSES IRREVERSIBLE EYE DAMAGE. HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL IF SWALLOWED. DO NOT GET IN EYES OR ON CLOTHING. AVOID CONTACT WITH SKIN. PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTION IN SOME INDIVIDUALS. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

Mixers, loaders, and others exposed to product must wear the following Personal Protective Equipment (PPE):

- long-sleeve shirt and long pants
- rubber gloves and apron
- shoes plus socks
- protective eyewear.

Follow manufacturer's instructions for cleaning / maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.

PHYSICAL AND CHEMICAL HAZARD This product is corrosive to mild steel.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic plants, fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public 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 sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

STORAGE AND DISPOSAL

This product (pH 3.0) is corrosive to mild steel.

PESTICIDE STORAGE: Do not store or transport in unlined metal containers. Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If waste 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 DISPOSAL: Metal container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration if allowed by state and local authorities. Plastic container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, if allowed by state and local authorities. If burned, stay out of smoke.

GENERAL: CONSULT FEDERAL, STATE AND LOCAL DISPOSAL AUTHORITIES FOR APPROVED ALTERNATIVE PROCEDURES.

CONDITIONS OF SALE AND WARRANTY

Thor GmbH warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. THOR GMBH MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of Thor GmbH and Seller. Risks such as ineffectiveness or other unintended consequences resulting from, but not limited to, failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL THOR GMBH OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

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3/9/2005
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DIRECTIONS FOR USE

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

INDUSTRIAL RECIRCULATING WATER COOLING TOWER: Acticide LG-F microbicide is recommended for the control of bacteria, algae and fungi. It should be added to the tower basin or some other point to ensure uniform mixing.

Add 0.3 to 1.86 lb of Acticide LG-F per 1000 gallons of water (35 to 220 ppm Acticide LG-F) weekly or as needed for maintenance. For noticeably fouled systems use an initial dose of 1.25 to 7.5 lb Acticide LG-F per 1000 gallons of water. Repeat if necessary to achieve control.

AIR WASHER SYSTEMS: For use only in industrial air washing systems that maintain effective mist eliminating components.

Add 0.3 to 7.5 lb Acticide LG-F to 1000 gallons of water (35 to 886 ppm Acticide LG-F) in the air washer sump, or chill water sump to ensure uniform mixing, for the control of bacteria, fungi and algae. A repeat treatment may be needed depending on the severity of contamination.

OIL FIELD INJECTION WATERS: Add 23 to 58 lb (2.8 to 6.9 gallons) Acticide LG-F per 1000 barrels of water (66 to 165 ppm Acticide LG-F) weekly or as needed to maintain control of slime-forming and sulfate reducing bacteria in oil and gas field water systems including enhanced recovery injection fluids and drilling fluids. An initial dose of 57 to 115 lb Acticide LG-F per 1000 barrels of water (162 to 324 ppm Acticide LG-F) may be used until control is achieved. This product may be used for terrestrial and off-shore oil drilling muds and packer fluids.

PAPER MILLS: Add 0.45 to 1.5 lb of Acticide LG-F per ton (dry basis) of pulp or paper produced as slug dose for the control of bacterial and fungal slime in the production of paper. Acticide LG-F should be added to a point such as the Beater or Hydropulper to ensure uniform mixing.

INDUSTRIAL RECIRCULATING CLOSED LOOP WATER COOLING SYSTEMS: Add 0.3 to 1.86 lb of Acticide LG-F per 1000 gallons of water in the system weekly to maintain control of bacteria, fungi and algae in the reservoir, recirculating line or some other point to ensure uniform mixing. For noticeably fouled systems an initial treatment with 1.25 to 7.5 lb Acticide LG-F per 1000 gallons of water may be needed depending on the severity of the fouling.

BREWERY PASTEURIZERS AND CAN WARMER SYSTEMS: Add 0.3 to 1.86 lb of Acticide LG-F per 1000 gallons of water in the system weekly or as needed to maintain control of bacteria, algae and fungi. For noticeably fouled systems an initial treatment with 1.25 to 7.5 lb of Acticide LG-F per 1000 gallons of water may be needed depending on the severity of the fouling.

ULTRA FILTRATION UNITS, SUCH AS REVERSE OSMOSIS SYSTEMS: Acticide LG-F microbicide is recommended for the control of bacteria and fungi in ultra filtration units, such as reverse osmosis systems. Add 10 - 333 ppm of Acticide LG-F microbicide (0.15 - 5 ppm active ingredient) into industrial ultra filtration or reverse osmosis systems by either continuous feed or periodic injection. Compatibility of Acticide LG-F microbicide with reverse osmosis membranes should be confirmed with membrane manufacturers.

For the control of bacteria and fungi in carbon beds, add 10 - 333 ppm of Acticide LG-F microbicide (0.15 - 5 ppm active ingredient). For periodic membrane cleaning, add 0.4 - 1.0 lbs of Acticide LG-F microbicide to every 120 gallons of cleaning solution (6 - 15 ppm active ingredient).

Badly fouled systems should be cleaned before treatment is begun.

PRESERVATIVE FOR METAL WORKING FLUIDS: Acticide LG-F microbicide is recommended for the control of bacteria and fungi in aqueous metal working fluid solutions and emulsions.

Add 32 fluid ounces (2 lb.) per 1000 gallons of emulsion every 4 weeks for maintenance of a non-fouled system. For a noticeably fouled system use an initial dose of 64 to 160 fluid ounces (4.5 to 10 lb.) per 1000 gallons emulsion followed by subsequent maintenance dosage above. A higher dosage rate and/or increased frequency of treatment may be required depending upon the nature and severity of contamination, level of control required, filtration effectiveness, system design, etc. The preservative should be dispensed into the use dilution of the metal working fluid using a metering pump and uniformly dispersed throughout the system.

PRESERVATIVE FOR ADHESIVES AND TACKIFIERS: Acticide LG-F microbicide is recommended as an in-container preservative for the control of bacteria and fungi in water soluble and water dispersed adhesives such as animal glues, vegetable glues, natural rubber latices, polyvinyl acetate, styrene-butadiene and acrylic latices. Acticide LG-F microbicide is recommended as a preservative for tackifiers derived from rosin and hydrocarbon resins.

Add 0.5 to 1.65 lb. Acticide LG-F microbicide to each 1000 lb. of fluid to provide 7 ppm to 25 ppm of active isothiazolone ingredients. A higher dosage rate providing up to 45 ppm active ingredient may be required for storage during extremely high temperatures and humidity.

WATER-BASED HYDRAULIC FLUID PRESERVATION: Acticide LG-F microbicide is recommended as a preservative for use in the manufacture and use of high water-based hydraulic fluids and invert emulsion hydraulic fluids typically prepared by emulsifying 40% by volume water in 60% by volume of mineral oil using an oil soluble emulsifying agent.

For the maintenance of a non-fouled system, use Acticide LG-F microbicide at 120 to 150 fluid ounces (10 to 12 lb) per 1000 gallons fluid to be followed by subsequent maintenance dosage. A higher dosage range and/or increased frequency of treatment may be required depending upon rate of dilution of the preservative with make-up fluid, the nature and severity of contamination, level of control required, filtration effectiveness, system design, etc.

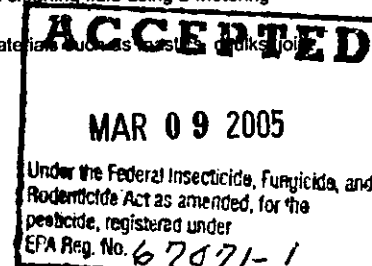
DISPERSED PIGMENT PRESERVATION: Acticide LG-F microbicide is recommended for the control of bacteria and fungi in the manufacture and storage of dispersed pigments such as kaolin clay, montmorillonite clay, titanium dioxide, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate and kieselguhr used in paint and paper productions. Add 0.6 to 2.25 lb of Acticide LG-F (250 to 1020 grams) to each 1000 lb (453 kg) of fluid to provide 7 to 25 ppm active isothiazolones.

METAL CLEANING FLUID PRESERVATION: Acticide LG-F microbicide is recommended as a preservative for use in the manufacture and use of alkaline, acid and emulsion based metal cleaning fluids typically used in electroplating, phosphatizing, galvanizing and general metal cleaning operations.

For addition to a metal cleaning concentration, add Acticide LG-F microbicide at a level to ensure that the final use-dilution fluid will contain 560 to 2250 ppm product (about 6 to 25 ppm active isothiazolones).

For direct addition to a fouled system, add 72 to 290 fluid ounces (6 to 23 lb) of Acticide LG-F microbicide to each 1000 gallons of use-dilution metal cleaning fluid every 3 to 4 weeks to provide 560 to 2250 ppm product (about 6 to 25 ppm active isothiazolones). A higher dosage range and/or increased frequency of treatment may be required depending upon rate of dilution of the preservative with the make-up fluid, the nature and severity of contamination, level of control required, filtration effectiveness, system design, etc. The preservative should be dispensed into the use-dilution metal cleaning fluid using a metering pump and uniformly dispersed throughout the system.

PRESERVATIVE FOR BUILDING MATERIALS: Acticide LG-F microbicide is recommended as an in-container preservative for the control of bacteria and fungi in building materials such as cements, mortars, grouts, cements, spackling and grouting. Add 0.5 to 1.65 lb of Acticide LG-F microbicide to each 1000 lb of fluid to provide 7 ppm to 25 ppm active isothiazolones.



DIRECTIONS FOR USE - CONTINUED

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

PRESERVATIVE FOR LATICES Acticide LG-F microbicide is recommended for the control of bacteria and fungi in the manufacture and storage of synthetic and natural polymer latices including: acrylics, styrene/butadiene, carboxylated styrene/butadiene, ethylene/vinyl acetate and biopolymers intended for industrial use such as xanthan gum, gum arabic, guar gum, protein derived polymers, starches and casein derived polymers. Add 0.5 to 3.3 lb. (227 g to 1.5 kg) of Acticide LG-F microbicide to each 1000 lb. (454 kg) of emulsion to provide 7 ppm to 50 ppm active isothiazolones.

Note: To insure uniform mixing, add Acticide LG-F microbicide to latex or solutions slowly with agitation. The actual concentrations required will depend upon such factors as the specific substance to be treated, frequency of repeated microbial contamination expected and level of protection required.

PRESERVATIVES FOR PAINTS AND COATINGS: Acticide LG-F microbicide is recommended as an in-container preservative for the control of bacteria and fungi in water based coatings such as paper, wood coatings and paints used for architectural, product finishes and special purpose coatings. Add 0.5 to 1.65 lb (227 to 750 grams) Acticide LG-F microbicide to each 1000 lb (454 kg) of fluid to provide 7 ppm to 25 ppm active isothiazolone ingredients. A higher dosage rate providing up to 45 ppm active ingredients may be required for storage during extremely high temperatures and humidity.

Specifically as a wood coating, Acticide LG-F is recommended for the protection of wood and wood products such as landscape timbers, fences, posts, pilings, cross ties, decks and similar exterior structures, from mold and mildew. As a pressure treatment for mold and mildew control for southern yellow pine, hemlock, ponderosa pine and other soft woods, treat with 267 to 840 ppm of Acticide LG-F (4.0 to 12.6 ppm active isothiazolones), by adding 1.9 to 6.6 lb or 29 to 101 fluid ounces of Acticide LG-F per 1,000 gallons of preservative. Thoroughly wet and allow to dry. A single application will provide protection for 12 weeks. Under extreme mildew conditions, treat with 1600 to 3200 ppm (24 to 48 ppm active) by adding 13.25 to 26.5 lb or 1.8 to 3.2 gallons of Acticide LG-F for every 1,000 gallons of wood treatment solution. Thoroughly wet and allow to dry. A single application will afford protection for 12 weeks.

SPECIAL PURPOSE COATING USES: Include use as a: <> preservative for electrodeposition paints or solutions, <> preservative for photoplate solutions or coatings, <> preservative in fount (or fountain) solutions used in the printing process as a maintenance fluid/coating and as a special coating for printing plates, and <> preservative in spin finish coatings for fibers. The application/addition directions for these special purpose coating uses are:

ELECTRODEPOSITION: Acticide LG-F microbicide is recommended as a tankside additive for the control of bacteria, fungi, and algae in re-circulating electrodeposition systems and associated rinse systems. Alternately, Acticide LG-F microbicide may be added through the components of the electrodeposition paint prior to their addition to the electrodeposition system.

Tankside Addition To Electrodeposition Systems: Acticide LG-F microbicide should be dispensed into the recirculating rinse system, ultrafilter permeate, or final distilled rinse system at a point to insure uniform mixing. When the system is noticeably fouled, add 650 to 2245 ppm Acticide LG-F microbicide (6.4 to 22.9 gallons per 10,000 gallons of fluid in the system). This will provide 10 to 35 ppm of active ingredients. Repeat until control is achieved. When microbial control is evident, add 321 to 962 ppm Acticide LG-F (3.2 to 10.1 gallons of fluid in the system) weekly or as needed to maintain the system. This will provide 5 - 15 ppm of active ingredient. A change of frequency of treatment may be required depending on the rate of dilution of the preservative with the makeup fluid, the nature and severity of contamination, level of control required, filtration effectiveness, system design, etc.

TREATMENT OF ELECTRODEPOSITION PAINT COMPONENTS: Initial Dose of Paint Components: Acticide LG-F microbicide should be added to the resin, pigment, or other component of the electrodeposition paint at a level to ensure that the final use-dilution fluid will contain 321 to 2245 ppm product (5 - 35 ppm active ingredient).

Supplemental Tanked Dosing of Electrodeposition System: If additional microbial control is necessary, Acticide LG-F microbicide may be added to the electrodeposition system tankside to supplement the microbicide incorporated through paint components. If the system becomes noticeably fouled, add 650 to 2245 ppm Acticide LG-F microbicide (6.4 to 22.9 gallons per 10,000 gallons of fluid in the system). This will provide 10 - 35 ppm of active ingredients. Repeat until control is achieved.

When microbial control is evident, the system can be maintained by addition of 321 to 962 ppm. Acticide LG-F microbicide (3.2 to 10.1 gallons per 10,000 gallons of fluid in the system) weekly or as needed. This will provide 5 - 15 ppm of active ingredients.

NOTE: Regardless of the manner of incorporation, the total active ingredient level in the system should never exceed 35 ppm (equivalent to 2245 ppm Acticide LG-F or 22.9 gallons per 10,000 gallons of system fluid).

PHOTOPATE PROCESSING, FOUNTAIN SOLUTIONS, AND INK/INK COMPONENTS: Acticide LG-F microbicide is recommended for the control of bacteria and fungi in photoplate processing such as stabilizer solutions and in fountain solutions. Acticide LG-F microbicide is recommended for water-based printing inks such as flexographic, gravure, screen and ink jet types. Acticide LG-F microbicide is recommended for the control of bacteria and fungi in printing ink components such as resins, plasticizers, water soluble dyes, pigments, gelling agents, waxes, surfactants, and thickeners. Acticide LG-F microbicide should be added to achieve the recommended dosage range for ink, ink components, fountain solutions and photoplate processing chemicals of 0.1% to 1.0% on a total weight basis. The optimum level range for acidic fountain solutions is 0.2% to 0.5%; the optimum level range for neutral fountain solutions is 0.5% to 0.8%. A level adjustment may be necessary to accommodate the slight change in solution formulations.

NOTE: To insure uniform mixing, add Acticide LG-F microbicide to latex or solution slowly with agitation. The actual concentrations required will depend upon such factors as the specific substance to be treated, frequency of repeated microbial contamination expected and level of protection required.

LIQUID SOAPS, CLEANERS, DETERGENTS, CARPET SHAMPOOS FOR INDUSTRIAL AND HOUSEHOLD USES AND IN POLISHES AND WAXES

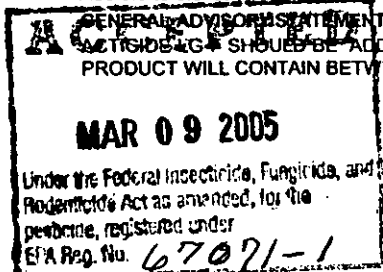
Acticide LG-F is added at a level of 0.4 to 1.5 lb. (180 - 680 grams) to each 1000lb. (453.6 kilograms) of product to be protected to provide 6 to 22.5 ppm of active isothiazolinones.

For control of bacteria and fungi in liquid detergents, in liquid laundry products and also in dishwashing detergents, waxes, polishes, and other similar cleaners, use 0.4 to 1.0 lb. of Acticide LG-F per each 1000lb. (453.6 kilograms) of treated product to provide a level of 6 to 15 ppm of active ingredient (isothiazolinones). Acticide LG-F may also be used for the control of bacteria and fungi in solutions that are then put into/onto wet wipes for use in household and industrial cleaning uses, additives, fresheners/refreshers/deodorizers, car care products and polishes/waxes. Wet wipes containing a solution preserved with this product may not be used for personal care, as baby wipes, or for food contact.

Acticide LG-F may also be used for control of bacteria and fungi in package utility products such as pre-moistened sponges and mops. Use 0.4 to 1.5 lb. in each 1000 lb. of water to pre-moistened sponges and mops.

PRESERVATIVE FOR AQUEOUS COMPOSITIONS: Acticide LG-F microbicide is recommended as an in-container preservative for the control of bacteria and fungi in aqueous products such as aqueous emulsions and dispersions including stabilized oil/water emulsions, surface preparation compounds, foam control products, nutrient solutions and pesticide formulations. Acticide LG-F may also be used for the control of bacteria and fungi in solutions that are then put into/onto wet wipes. Wet wipes containing a solution preserved with this product may not be used for personal care, as baby wipes, or for food contact.

Add 0.5 to 3.3 lb. (227 g to 1.5 kg) of Acticide LG-F microbicide to each 1000 lb. (454 kg) of aqueous product to provide 7 ppm to 50 ppm active isothiazolones.



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