

MILDEWSTATIC AGENT

Ultra-Fresh[®] 15

ACTIVE INGREDIENTS:

Diiodomethyl p-tolyl sulfone.....15 %

INERT INGREDIENTS.....85 %

TOTAL.....100 %

KEEP OUT OF REACH OF CHILDREN

DANGER!

CORROSIVE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes eye and skin damage

Do not get in eyes, on skin or on clothing. Harmful if swallowed.

Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Wear goggles, face shield and rubber gloves when handling. Harmful or fatal if swallowed.

This formulation is not cleared by the Federal Food, Drug, and Cosmetic Act for use in paper, paperboard products, paper coatings and adhesives intended for use in packaging, transporting or holding food.

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyes open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

IF SWALLOWED: Drink a large quantity of milk, egg white, gelatin mixture, or, if these are not available, a large quantity of water. Avoid alcohol.

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

Thomson Research Associates assumes no responsibility when this product is not used in accordance with the instructions and information contained on this label.

EPA Reg. No. 10466-37
EPA Est. No. 64776-OK-1

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 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.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Store in a dry area. Keep container closed when not in use.

PESTICIDE DISPOSAL: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Completely empty liner by shaking and tapping sides and bottom to remove remaining product. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

Manufactured for:

Thomson Research Associates
95 King Street East, Suite 100
Toronto, Ontario
M5C 1G4

Ultra-Fresh[®] is a registered trademark of Thomson Research Associates

Net Contents:

DIRECTIONS FOR USE

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

USE IN PAINTS

Ultra-Fresh[®] 15 is an effective mildewcide and algicide for exterior and interior latex and solvent based paints. Use levels in paint will vary depending on the formulation and expected severity of field conditions. Ultra-Fresh[®] 15 can be added at any stage of the manufacturing process. General use: In paint systems use 10.7-26.7 lb Ultra-Fresh[®] 15 per 100 gallons of paint.

USE IN PIGMENT DISPERSIONS, INKS, EMULSIONS AND EXTENDER SLURRIES

To inhibit the growth of spoilage fungi during storage of water based suspensions and dispersions Ultra-Fresh[®] 15 will impart protection when dosed at 0.13-1.0% (w/w). Add Ultra-Fresh[®] 15 at a point in the production process where sufficient mixing will assure good suspension of the material as other ingredients are added.

USE IN ADHESIVES, CAULKS, AND SEALANTS

Ultra-Fresh[®] 15 is recommended for use in adhesives and binders, e.g., joint compounds, tile mastics, wall paper paste, carpet backing, air filter and foil scrim Kraft laminate; and sealants and caulks where mildew growth on the applied or stored product may be a problem. For control of mildew growth add 0.067-1.9% Ultra-Fresh[®] 15 at a point in the production process where sufficient mixing will assure good suspension of the material as other ingredients are added. This Product is not cleared for use in adhesives, caulks or sealants that come in contact with food.

USE IN LEATHER TANNING

Ultra-Fresh[®] 15 is used in protecting chrome or vegetable tanned leather from mold and mildew during in-tannery wet processing and for protecting wet-blue during long storage and long transportation times. For normal protection of chrome-tanned cattle hide (based on white weight of hides) use 0.053-0.80%, for sheep hides (based on drained pickle weight) 0.21-0.3% and for goat and small skins use levels should be calculated on the dry basis of the skin weight, assuming limed weight to be 20% dry basis and pickled weight to be 33% dry basis. When long hold or export protection is required, use 0.08-0.18% for cattle, 0.29-0.5% for sheep, and on goat and small skins follow recommendations for normal protection. Use level recommendations during retan/colour/falliquor protection of chrome-tanned hides for all hide types are 0.4-1.2% (% on wet blue weight). In all applications, add the Ultra-Fresh[®] 15 through the drum door. This should be done just prior to chrome addition or together with formalde. In the case of retan/colour/falliquor, add Ultra-Fresh[®] 15 prior to the prime falliquor feed.

USE IN WOOD PRESERVATION (For Above Ground Use Only)

Ultra-Fresh[®] 15 can be used for control of mildew sapstain, and wood rotting organisms at wood treatment facilities or incorporated into other registered wood preservatives. For typical end uses such as building lumber, furniture, frames, decking, fences shingles, and siding logs and poles, add Ultra-Fresh[®] 15 to the water-based treatment solution with constant agitation for optimum results. Concentrations of 0.1-1.0% (w/w active ingredient) are recommended. For dip treatments, submerge for a minimum of one minute. Spray application should use at least 0.5% (w/w active ingredient) concentration of Ultra-Fresh[®] 15. Spray to run-off if intermittent spraying. For pressure treatment, retention levels of 0.13-2.7 lb pcf are recommended. Ultra-Fresh[®] 15 can be used with other wood preservatives such as chromated copper arsenate (CCA), quaternary ammonium compounds, borates, tributyltin compounds, and zinc and copper salts at levels of 67-13000 ppm. In cases where Ultra-Fresh[®] 15 is incorporated into a formulated wood preservative, follow label directions for the finished product. Do not use treated wood where there is direct contact with food, feed, potable water, livestock, or other animals or for surfaces likely to have repeated or prolonged skin contact. Uses where there will be direct contact with plants are not recommended. Formulators are responsible for obtaining EPA registration of formulated products.

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USE IN METALWORKING FLUIDS

Ultra-Fresh[®] 15 is recommended for use in metalworking fluids and lubricants to prevent fungal growth. The level of *Ultra-Fresh*[®] 15 to be incorporated into metalworking fluid concentrate will vary depending on the dilution factor recommended by the manufacturer. For efficient fungistatic activity a concentration of 600-19000 ppm of *Ultra-Fresh*[®] 15 in the diluted fluid is suggested.

USE IN TEXTILES AND NON-WOVENS (NON-CLOTHING)

To prevent mildew growth on products such as canvas, carpet, cordage, drapes, filters, and shower curtains. Use levels depend upon the expected severity of exposure or end-use conditions. In general 3.3-33.4 lb of *Ultra-Fresh*[®] 15 per 1000 lb of dry fabric (0.33-3.3 %) is needed. *Ultra-Fresh*[®] 15 is best added together with the water-repellant emulsion or dye to ensure durability.

USE IN PAPER PRODUCTION

This product aids in the control of objectionable fungi on pulp, paper mills and the additive system and for the preservation of pulp, pigment dispersions, alum emulsions, adhesives, defoamers, polymers, and paper products. This product is used to inhibit fungal growth that causes discoloration, odor and degradation in paper and paperboard. This product is not cleared for use in paper or paperboard products that come in contact with food.

Additions can be made on a continuous or intermittent basis, depending upon the severity of the contamination. Badly fouled systems must be cleaned before treatment is begun. Apply at a point in the system where the product will be uniformly mixed.

Intermittent or Slug Method - Initial Dose: When the system is noticeably fouled add this product at the rate 0.0051-5.13 lb per ton of pulp, or paper produced. Addition to the additive system should be made directly at a rate of 0.026-21.3 lb per 1000 gallons. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add this product at the rate of 0.0051-2.56 lb per ton of pulp or paper produced. Treat the system as need to maintain control. Addition of this product to the additive system may be reduced to 0.026-10.8 per 1000 gallons.

Continuous Feed Method - Initial Dose: When the system is noticeably fouled add this product at a rate of 0.0051-2.7 lb per ton of pulp or paper produced. Addition to the additive system should be made directly at a rate of 0.026-16.2 lb per 1000 gallons. Repeat until control is achieved.

Subsequent Dose: Maintain by continuous feed of this product at the rate of 0.0051-2.7 lb per ton of pulp or paper produced.

MOLD INHIBITION IN PAPER AND PAPERBOARD

This product is used to inhibit fungal growth which causes discoloration, odor, and degradation in paper and paperboard. This product may be applied to the white water stock at a rate of 0.13-21.8 lb per ton of dry fibre produced. For inhibition of wet lap or sheet pulp, this product should be applied to the dewatered pulp surfaces via applicator rolls or shower at 0.13 to 21.8 lb per ton of dry fibre produced. Application can also be made at the size press or water box. Application is made at the rate of 540-54000 ppm of this product in a solution applied to the paper sheet.

PRESERVATION IN PAPER PLANT STORAGE

This product should be added directly to the material to be preserved prior to manufacturing into the finished product, i.e. pulp, alum, broke, polymers, defoamers, emulsions, adhesives, paper mill coating, pigment and slurries. The dosage rate will depend on the material to be preserved and the storage time. The usual additions should be 0.2 ppm active for storage of microbial resistant material and up to 250 ppm active for less resistant materials. Under extreme conditions of spoilage the dosage rate should be increased to 4 to 400 ppm active. The above dosing recommendations are based on a minimum storage time of two weeks.

ACCEPTED

APR 13 1999

Under the Federal Insecticide, Fungicide, and
Rodenticide Act as amended, for the
pesticide, registered under
EPA Reg. No. 10466-37

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Ultra-Fresh*

TECHNICAL DATA SHEET

Ultra-Fresh® 15

Bacteriostatic-Fungistatic Liquid for Commercial Applications
E.P.A. Registration No. 10466-37

PRODUCT DESCRIPTION

Ultra-Fresh® 15 is a light brown, finely divided, water-based suspension, which imparts bacterial, mildew and algicidal protection to fabrics, polymeric systems, wood and leather.

PHYSICAL PROPERTIES

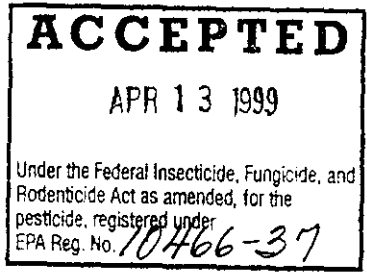
Ultra-Fresh® 15 is stable through a pH range of 3.0 to 10.5. In a laboratory evaluation, *Ultra-Fresh® 15* was heated in water buffered to pH 9.2 at 50 C for 8 days. No adverse effects were noted. Thus, the high pH values of materials such as acrylic paints present no stability problems.

- Appearance: Light brown finely divided suspension
- Boiling Point: 100 C / 212 F
- Freezing Point: -24 C
- pH: 7.1
- Viscosity: 1612 cts at 25 C
- Specific Gravity: 1.11
- Water Solubility: Solution forms a suspension in water

APPLICATION PROCEDURES

Ultra-Fresh® 15 can be used to prevent bacterial, mildew and algal growth in the following products:

1. Latex caulks and sealants
2. Pigment dispersions
3. Chrome-tanned cattle hides
4. Wood
5. Latex paints
6. Adhesives
7. Fabrics
8. Carpets
9. Filters and Air-filters



Please refer to the appropriate "Product Information Sheet" for more details.

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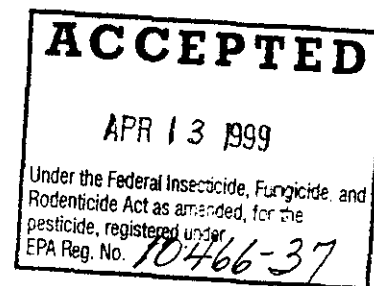
HYDROLYSIS

Ultra-Fresh® 15 hydrolyses into Iodine and Toly Sulphonic acid derivatives.

pH	t _{1/2}
9.0	44 days
5.0	166 days

FIRST AID

- If Ultra-Fresh® 15 gets on the skin, wash area immediately with soap and water.
- If Ultra-Fresh® 15 gets in the eye, flush immediately with copious amounts of water and call a physician.
- In case Ultra-Fresh® 15 is ingested, drink large amounts of water and induce vomiting. Never give anything to drink or induce vomiting in an unconscious or convulsing victim. Call a physician.
- For details, see the Material Safety Data Sheet.



NOTICE

The technical information and suggestions for use made herein are based on TRA's research and experience and are believed to be reliable, but such information and suggestions do not constitute a warranty, and no patent liability can be assumed. Since TRA has no control over the conditions under which this product is transported, stored, handled, used or applied, it is TRA's intent that its liability on any basis be limited to the price of the product used.