

# Ultra-Fresh<sup>®</sup> DM-50

## DIRECTIONS FOR USE

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

For use as a bacteriostatic and fungistatic preservative finish for textiles in the presence of moisture; to protect latex and PVA emulsions, gelatin and starch based adhesives in the can and in those products to which such emulsions and adhesives are applied from bacterial and fungal degradation; for the protection of polyurethane foams and adhesive films against fungal growth and to control bacterial and fungal growth in synthetic and cellulosic sponges. When this product is blended with the plasticizer prior to plastic ingredient mixing, bacteriostatic (pink stain) and fungistatic protection is conferred to plastics.

*Ultra-Fresh<sup>®</sup> DM-50* also eliminates house dust mites from treated materials.

*Ultra-Fresh<sup>®</sup> DM-50* is to be used as directed in the accompanying Technical Data and Product Information Sheets.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. 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 E.P.A..

## BACTERIOSTAT & FUNGISTAT

### ACTIVE INGREDIENTS

tri-n-butyltin malcate.....25.0 %

INERT INGREDIENTS.....75.0 %

**KEEP OUT OF REACH OF CHILDREN**

**POISON!**



**DANGER!**

### PRECAUTIONARY STATEMENT:

Hazard to humans and domestic animals. Corrosive. Causes eye and skin damage. Fatal if swallowed or absorbed through skin. Do not get in eyes, on skin, or clothing. Wear protective clothing: goggles, face shield, and rubber gloves when handling. Avoid contamination of food.

### STATEMENT OF PRACTICAL TREATMENT:

In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes and call a physician. For eyes, call a physician. Remove and wash contaminated clothing before reuse. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are unavailable, large amounts of water. Avoid alcohol. Call a physician immediately.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

## STORAGE AND DISPOSAL

**Prohibitions:** Do not store or transport in unlined metal containers. Do not contaminate with strong oxidizing or reducing agents. Do not contaminate water, food or feed by storage or disposal or cleaning of equipment. **Pesticide Disposal:** Pesticides are acutely hazardous. Improper disposal of excess pesticide or rinsate 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 Disposal

**Metal Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

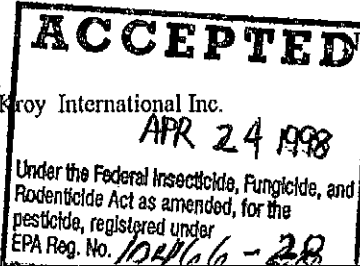
**Plastic containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**General: Consult Federal, state, or local disposal authorities for approved alternative procedures.**

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E.P.A. Reg. No. 10466-28  
E.P.A. Est. 34310-RI-01

*Ultra-Fresh<sup>®</sup>* is a registered trademark of Krocy International Inc.



Contents:

U.S. Gallons

PM 33 10466-28 4-24-98 1047

2017

# THOMSON RESEARCH ASSOCIATES

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## TECHNICAL DATA SHEET

### *Ultra-Fresh*<sup>®</sup> DM-50

E.P.A. Registration No. 10466-28

#### PRODUCT DESCRIPTION

*Ultra-Fresh*<sup>®</sup> DM-50 is a colourless liquid used for rendering fabrics, water-based emulsions, polyurethane foams, synthetic/cellulosic sponges, plastics and polymers resistant to attack by micro-organisms such as bacteria, fungi and house dust mites.

#### PHYSICAL PROPERTIES

Boiling Point	198-200 C
Freezing Point	Below -20 C
Specific Gravity	1.048 at 27 C
Solubility	Soluble or miscible in water and most organic solvents.

#### BIOLOGICAL ACTIVITY

The following table lists the minimum concentrations of *Ultra-Fresh*<sup>®</sup> DM-50, dispersed in aqueous media, required to inhibit the growth of various micro-organisms in test tube cultures. This table is intended to provide an indication of the broad-spectrum activity of *Ultra-Fresh*<sup>®</sup> DM-50 in aqueous solution and is neither intended as a claim for recommended use concentrations under practical conditions, nor as a list of micro-organisms involved in specific end-use conditions.

*Ultra-Fresh*<sup>\*</sup>  
Trade Marks

Steri-Septic<sup>™</sup>

Minimum Concentration (ppm) Required for  
Complete Inhibition of Growth

BACTERIA

A. Gram positive

Bacillus cereus	10
Bacillus mycoides	5
Bacillus megaterium	37
Bacillus subtilis	26
Brevibacterium ammoniagenes	8
Clostridium oroticum	150
Corynebacterium pseudodiphtheriticum	4
Nocardia asteroides	2
Staphylococcus aureus	2
Streptovercillium reticulum	25

B. Gram negative

Acinetobacter calcoaceticus	5
Enterobacter aerogenes	722
Enterobacter cloacae	656
Escherichia coli	334
Klebsiella pneumoniae	24
Morganella morganii	26
Proteus mirabilis	36
Pseudomonas aeruginosa	200
Salmonella schottmuelleri	620
Salmonella typhimurium	30

FUNGI

Alternaria alternata	5
Aspergillus flavus	30
Aspergillus fumigatus	30
Aspergillus niger	15
Aureobasidium pullulans	31
Candida albicans	2
Chaetomium globosum	less than 1
Curvularia genticulata	9



Minimum Concentration (ppm) Required for Complete Inhibition of Growth

Fungi (contd.)

Epidermophyton floccosum	1
Fusarium oxysporum	25
Gloeophyllum trabeum	5
Lentinus lepideus	5
Mucor racemosus	15
Penicillium funiculosum	15
Penicillium variabile	15
Poria placenta	5
Rhizopus sp.	10
Schizophyllum commune	15
Serpula lacrymans	15
Stachybotrys chartarum	31
Trichoderma viride	5
Trichophyton mentagrophytes	7
Trichophyton rubrum	1

APPLICATION PROCEDURES

The application levels given below are representative of those found necessary in practice. For each specific use, a trial run is recommended in order to determine the application level and method of addition for the particular product being treated.

1. Fabrics

Ultra-Fresh® DM-50 can be padded on to fabrics from either an aqueous or solvent dispersion. Sufficient Ultra-Fresh® DM-50 should be added to the pad bath to give a fabric pick-up of 0.2% to 0.4%. This product, when applied according to recommendations, will last through at least 25 conventional launderings.

2. Water-Based Emulsion/Adhesives

Water-based adhesives and related emulsion systems can be rendered resistant to biologically induced instability and degradation by the addition of Ultra-Fresh® DM-50. An application level of 0.08% w/w based on total emulsion weight is recommended. Ultra-Fresh® DM-50 should be treated as one of the components and added prior to mixing. In the case of hot-melt adhesives and



temperature should not exceed 200°C. The in-can and in-use protection conferred by *Ultra-Fresh*® DM-50 will last indefinitely in the undiluted adhesive or emulsion.

3. Polymer Systems

Polymer materials such as vinyl can be rendered resistant to the growth of mildew by the incorporation of *Ultra-Fresh*® DM-50. Add 0.1% to 0.25% by weight of *Ultra-Fresh*® DM-50 to the resin mix. The exact amount required for a specific usage can be readily determined by means of a preliminary trial.

TOXICITY

A. Animals

Dermal-Acute Cutaneous LD<sub>50</sub> (rabbits) = 925 mg/kg  
Oral-Acute Oral LD<sub>50</sub> (rats) = 330 mg/kg  
Inhalation-Acute Inhalation LCT<sub>50</sub> = 2.7 mg/L of air

Eyes (rabbits) *Ultra-Fresh*® DM-50 is corrosive to eye tissue.

B. Birds

Acute Oral LD<sub>50</sub> (Mallard Duck) = 1,631 mg/kg  
Dietary LD<sub>50</sub> 8-day - Mallard Duck = 3,401 ppm  
- Bobwhite Quail = 4,601 ppm

C. Fish

Fish Bioassay, 96-hour Static TL<sub>50</sub>  
-Rainbow Trout = 54.6 ppb

D. Invertebrate

Acute Toxicity LC<sub>50</sub> 24-48 hours (*Daphnia magna*) = 250 ppb

E. Human Skin Tests

With *Ultra-Fresh*® DM-50 impregnated fabrics, primary sensitization patch tests indicated no sensitization at the highest level tested: i.e., 0.416% by weight of *Ultra-Fresh*® DM-50 on the fabric.



**Ultra-Fresh® DM-50 – TDS**

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**PRECAUTIONS**

*Ultra-Fresh®* DM-50 is a potentially dangerous material and should be handled with the care and common sense that be accorded to all biologically active chemicals. *Ultra-Fresh®* DM-50 is corrosive to eyes and exposure can cause skin irritation. Fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Avoid contamination of food. Treated effluent should not be discharged where it will drain into lakes, streams, ponds, or public water.

**FIRST AID**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

**NOTE TO PHYSICIAN**

Probable mucosal damage contraindicates the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

**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.

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## *Ultra-Fresh*<sup>®</sup> DM-50 PRODUCT INFORMATION SHEET ANTI HOUSE DUST MITES ACTIVITY

E.P.A. REG No. 10466-28

E.P.A. EST No 34310-RI-01

Laboratories in Germany, Canada and England have found *Ultra-Fresh*<sup>®</sup> DM-50 to be effective in eliminating live house dust mites on treated 100% cotton, 100% polyester and 100% wool fabrics and fibers.

For textile items, an application rate of 0.2-0.3% of *Ultra-Fresh*<sup>®</sup> DM-50 on the weight of the goods has been found to confer anti house dust mites' activity lasting up to at least 25 conventional launderings.

*Ultra-Fresh*<sup>®</sup> DM-50 treated polyurethane foams also reduced the number of retrieved house dust mites and the application rate there is also 0.2-0.3% on the weight of foam.

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. YOU SHOULD THOROUGHLY TEST ANY APPLICATION AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZATION. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ANY PARTICULAR PATENT.

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*Ultra-Fresh*<sup>\*</sup>  
\*Trade Marks

Steri-Septic<sup>®</sup>