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ACCEPT

AUG 2 8 1986

Under the Federal Insecticide, Fungicide, and Rodenticide Ast, as amended, for the pesticide registered under EPA Bog. No. 1046-32

TECHNICAL DATA SHEET

ULTRA-FRESH AF-25

Bacteriostatic-Fungistatic Liquid Preservative E.P.A. Registration No. 10466- 32 E.P.A. Establishment No. 34310-RI-01

PRODUCT DESCRIPTION

JLTRA-FRESH AF-25 is a clear pale amber liquid used for rendering fabrics and water-based emulsion resistant to attack by microorganisms.

PHYSICAL PROPERTIES (These do not constitute specifications)

Appearance:

Active Ingredient:

Solvent Carrier:

Weight per Gallon:

Viscosity:

Flash Point: Solubility: Clear amber liquid

25% 2-n-Octyl-4-isothiazolin-3-one

Propylene glycol

8.6 lb.

40 cps (Brookfield #1 spindle at 60 rpm, 25°C.)

> 200°F (Pennsky-Martens Closed Tester)

The maximum solubility of the active ingredient in water is 800 ppm (0.08% on a weight basis), a level adequate for the preparation of completely soluble fabric treatment solutions. To prepare concentrates of ULTRA-FRESH AF-25, add propylene glycol to assure homogeneity. Concentrates may be then diluted in water to prepare a fabric treatment solution containing 5.0 to 10.0 ppm

of active ingredient.

STABILITY

ULTRA-FRESH AF-25 as supplied appears to be stable indefinitely at room temperature. More dilute solutions in propylene glycol and aqueous treatment solutions are also considered completely stable. The material is not stable in the presence of ammonia, primary and secondary amines, or salts of these compounds.





TOXICITY

The acute toxicity characteristics of ULTRA-FRESH AF-25 are:

- A. Acute oral toxicity (LD_{50}) in rats = 2740 mg/Kg
- B. Acute dermal toxicity (LD₅₀) on rabbits = <1.25 ml/Kg (abraded skin >5.00 ml/Kg (unabraded sk

EYE IRRITATION

ULTRA-FRESH AF-25 as supplied is strongly irritating when applied to the eyes of rabbits, even when the eyes are washed 2 seconds after application. In eyes that were not washed, the effects persisted beyond 14 days.

SKIN IRRITATION

ULTRA-FRESH AF-25 as supplied is a primary skin irritant when tested according to the standard procedure of the Federal Hazardous Substances Act.

Patch tests were run on 93 human volunteers to monitor possible primary irritation and sensitization caused by contact of skin with fabrics treate with ULTRA-FRESH AF-25. The type of test was the repeated insult patch test. Fabrics had been treated with 50 or 150 ppm active ingredient based on the weight of substrate. Patches were applied 24 hours per day 3 days per week for 3 weeks (9 exposures). After a rest period of 2 weeks, a fresh patch was applied for 24 hours, and the sites were reexamined 24 and 72 hours after removing the fabric.

No clinically significant evidence for primary or cumulative irritation and contact sensitization reactions was observed on any subject.

ACUTE INHALATION

Exposure of rats to a nominal concentration of 7.18 mg ULTRA-FRESH AF-25 as supplied per liter of air produced no immediate or subsequent signs of toxicity. Exposure of 20 rats to the unformulated active ingredien at 4 mg/liter resulted in 11 dead.

HANDLING PRECAUTIONS

ULTRA-FRESH AF-25 as supplied causes severe eye and skin irritation may be harmful if inhaled or swallowed. Therefore, rigorous precautions should be taken to avoid all personal contact with it including contamin ation of clothing or inhalation of the vapor or mist. Wear goggles and rubber gloves. Keep containers closed when not in use. Use with adequa ventilation. Do not take internally. Wash thoroughly after handling. Remove contaminated clothing immediately and launder before rewearing.

FIRST AID

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and call a physician. Wash skin with soap and plenty of water. Remove and launder contamined clothing. If the material is swallowed, induct vomiting immediately by giving two glasses of water to drink and sticking a finger down the throat; call in a physician promptl Never give anything by mouth to an unconscious person.

If inhaled, remove victim to fresh air. If not breathing, give artifica respiration. If breathing is difficult, give oxygen. Call in a physician.

BIOLOGICAL PERFORMANCE

Relatively low concentrations of ULTRA-FRESH AF-25 inhibit the growth of a wide variety of fungi, as Table 1 indicates.

The information given in this table is based on the present state of our knowledge, but any conclusions and recommendations are made without liability on our part. Buyers and users should make their own assessment of our products under their own conditions and for their own requirements.

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BIOLOGICAL ACTIVITY OF ULTRA-FRESH AF-25 BY SERIAL DILUTION TESTS

Test Fungus	in pom of Active Incredient
Alternaria dianthicola (11782) Aspergillus niger (9642) Aspergillus oryzae (10196-QM #1278) Aspergillus repens (9294) Candida'albicans, yeast (11651) Chaetomium globosum (6205) Cladosporium resinae (11274) Mucor rouxii Penicillium funiculosum (9644) Phoma glomerata (6735) Phoma pigmentivora (12569) Pullularia pullulans (9348) Rhizopus stolonifer (10404) Rhodotorula rubra, yeast (9449) Saccharomyces cerevisiae, yeast (2601)	1 8 2 2 2 4 0.5 8 1 1 or less 2 0.3 4 4
Test Bacteria	
Klebsiella pneumoniae Staphylococcus aureus	22.5 18.7

DIRECTIONS FOR USE

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 best application level and method addition for the particular product being treated.

1. Fabrics

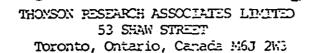
ULTRA-FRESH AF-25 can be padded on to fabrics from either an aqueous or solvent dispersion. Sufficient ULTRA-FRESH AF-25 should be added to the pad bath to give a fabric pick-up of 0.075 to 0.125% w/w.

Water-Base Emulsions/Adhesives

Water-base adhesives and related emulsion systems can be rendered resistant to biologically induced instability and degradation by the addition of ULTRA-FRESH AF-25. An application level of 0.05% w/w based on total emulsion weight is recommended. ULTRA-FRESH AF-25 should be treated as one of the components and added prior to mixing. In the case of hot-melt adhesives the temperature should not exceed 200°C. The in-can and in-use protection conferred by ULTRA-FRESH AF-25 will last indefinitely in the undiluted adhesive or emulsion.

Polymer Systems

Polymeric materials such as vinyl can be rendered resistant to the growth of mildew by the incorporation of ULTRA-FRESH AF-25. Add 0.05% to 0.125% by weight of ULTRA-FRESH AF-25 to the resin mix. The exact amount required for a specific usage can be readily determined by means of a preliminary trial.



Product Information Sheet
AF-25

E.P.A. Registration No.: 10466-32

E.P.A. Est. No.: 34310-RI-01

To effectively resist the growth and destructive action of a wide variety

of bacteria, mold, mildew and other

fungi between shampooings and other

Bacteriostatic and fungistatic action

is exhibited on contact in the presenc

liquid cleaning processes.

BACTERIOSTATIC AND FUNGISTATIC AGENT FOR APPLICATION TO CARPETS AND RUGS BY PROFESSIONAL CARPET CLEANERS ONLY

Primary Use

of moisture.

Bacteriostatic and Fungistatic Activity on Textile Surfaces

ULTRA-FRESH AF-25 confers bacteriostatic and fungistatic protection to textile (carpet) rfaces when the application procedures set below are followed.

ULTRA-FRESH AF-25 may be used on the following fibers between shampooing or other liquid cleaning processes:

Acetates Acrylics Polyethylene Polyolefins

Cotton

Polypropylene Rayon

Nylon Polvester

Rayon

Orlon

Application Instructions

- Dilute one fluid ounce of ULTRA-FRESH AF-25 with two gallons of cold water.
- Add to portable sprayer and adjust so that one gallon of diluted ULTRA-FRESH AF-25 will treat 600 square feet of textile (carpet) surface.
- Spray evenly over carpet.

- 4. Using pile brush or similar, brush i diluted ULTRA-FRESH AF-25 ending up brushing in one direction for appear ance of pile. Employ aluminium foil under furniture legs until carpet is dry.
- 5. Thoroughly rinse sprayer after using
- May be applied to carpet backings pac.

The information and data contained herein are based on information we believe relia' You should thoroughly test any application, and independently conclude satisfactor performance before commercialization. Suggestions of uses should not be taken as inducements to infringe any particular patent.

ACCEPTED Under the Federal Issecticide. Fundicide, and Rodesucide Act, as amended, for the pesticide as amended under 10466-32 TPA Reg. No.