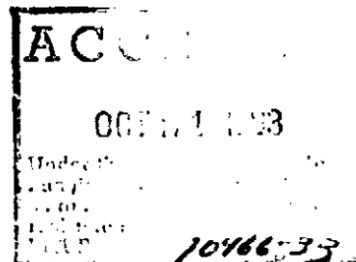


THOMSON RESEARCH ASSOCIATES

53 Shaw Street, Toronto, Ontario M6L 2W3
Tel: (416) 366-8954. Telex: 065-22053



PRODUCT INFORMATION SHEET ULTRA-FRESH AF- 5

E.P.A. Registration No. 10466-33

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

BACTERIOSTATIC AND FUNGISTATIC AGENT FOR PAINTS

Bacteriostatic and Fungistatic Activity in Latex and PVA Paints

ULTRA-FRESH AF- 5 treatment protects latex and PVA paints in the can and when spread as films from bacterial degradation and mold and mildew growth. Microbial contamination of paints may result in odor problems, discoloration and deterioration. ULTRA-FRESH AF- 5 treatment in the paints inhibits the growth of microorganisms to aid in the control of these effects.

Bacteriostatic and fungistatic action is exhibited on contact in the presence of moisture.

Primary Use

To provide preservation for latex & PVA paints against a wide variety of bacteria and fungi.

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.



Trade Marks
Marques Déposées

UltraFresh

A division of KROY UNSHRINKABLE WOOLS LTD.

THOMSON RESEARCH ASSOCIATES LIMITED

55 Shaw Street Toronto Ontario M6J 2W3
Telex 4416 566-8954 Telex 065-22053

TECHNICAL DATA SHEET

ULTRA-FRESH AF-5

AC
OCT 21 1963
Under the Federal
Fungicide, and Insecticide
Act, registered for the control
of insects and mites
E.P.A. Reg. No. 10466-33

Bacteriostatic and Fungistatic Liquid Preservative
E.P.A. Registration No. 10466-33
E.P.A. Establishment No. 34310-RI-01

PRODUCT DESCRIPTION

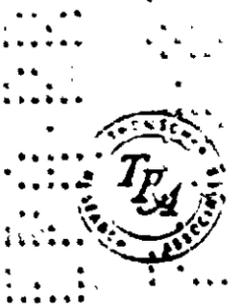
ULTRA-FRESH AF-5 is a clear pale amber liquid used for rendering fabrics and water-based emulsions resistant to attack by microorganisms.

PHYSICAL PROPERTIES (These do not constitute specifications)

Appearance:	Clear, pale amber liquid
Active Ingredient:	5% 2-n-Octyl-4-isothiazolin-3-one
Solvent Carrier:	Propylene Glycol
Density:	8.6 lb/gal
Viscosity @ 25°C:	40 cps (Brookfield #1 spindle @60 rpm)
Flash Point (Pennsky-Mortens Closed Tester):	217°F
Solubility:	The maximum solubility of the active ingredient is 800 ppm (0.08% on a weight basis) in water, a level adequate for the preparation of fabric treatment solutions.

STABILITY

ULTRA-FRESH AF-5 as supplied appears to be stable indefinitely at room temperature, and aqueous treatment solutions are also considered completely stable. The product is not stable in the presence of ammonia, primary or secondary amines, or salts of these bases.



Trade Names
Markets Deposited

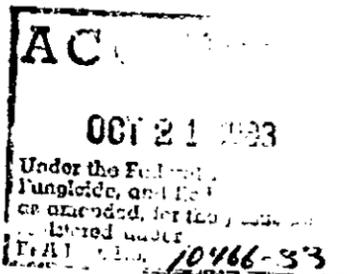
UltraFresh

THOMSON RESEARCH ASSOCIATES LIMITED

55 Shaw Street Toronto Ontario M6J 2W3
Te 416-566-8954 Telex 065-22055

TECHNICAL DATA SHEET

ULTRA-FRESH AF-5



Bacteriostatic and Fungistatic Liquid Preservative
E.P.A. Registration No. 10466-33
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Trade Marks
Marques Déposées

UltraFresh

TOXICITY

The acute toxicity characteristics of ULTRA-FRESH AF-5 as supplied are:

Acute oral toxicity (LD ₅₀) to rats or rabbits	6000 mg/kg
Acute dermal toxicity (LD ₅₀) on rabbits	2.5-5.0 ml/kg on abraded or intact skin

EYE IRRITATION

ULTRA-FRESH AF-5 as supplied is strongly irritating when applied to the eyes of rabbits, and the irritation persists even when the eyes are washed 2 seconds after contact. In unwashed eyes, the effects persist beyond 14 days.

SKIN IRRITATION

ULTRA-FRESH AF-5 as supplied is not a primary skin irritant when tested according to the standard procedure of the Federal Hazardous Substances Act. However, contact may cause temporary reddening (erythema) of abraded or intact skin; the irritation essentially disappears within 72 hours.

ACUTE INHALATION

Exposure of rats to a nominal concentration of 4.4 mg of ULTRA-FRESH AF-5 as supplied per liter of air produced no immediate or subsequent signs of toxicity. Exposure of 20 rats to the unformulated active ingredient at 4 mg/liter of air resulted in 11 deaths.

HANDLING PRECAUTIONS

ULTRA-FRESH AF-5 as supplied causes severe eye irritation and mild reddening of the skin and may be harmful if swallowed. Therefore, precautions should be taken to prevent personal contact and contamination of clothing. Wear goggles and rubber gloves. Keep containers closed when not in use. Use with adequate ventilation. Do not take internally. Wash thoroughly after handling. Remove contaminated clothing and launder before rewearing.

BEST DOCUMENT AVAILABLE

FIRST AID

In case of contact, immediately flush the eyes with plenty of water for at least 15 minutes and call in a physician. Wash skin with soap and plenty of water. Remove and launder contaminated clothing.

If the material is swallowed, induce vomiting at once by giving two glasses of water to drink and sticking a finger in the throat; call in a physician promptly. Never give anything by mouth to an unconscious person.

BIOLOGICAL PERFORMANCE

Relatively low concentrations of ULTRA-FRESH AF-5 inhibit the growth of a wide variety of fungi, as Table 1 indicates.

TABLE 1

BIOLOGICAL ACTIVITY OF ULTRA-FRESH AF-5 BY SERIAL DILUTION TESTS

<u>Test Fungus</u>	<u>Minimum Inhibiting Concentration in ppm of Active Ingredient</u>
Alternaria dianthicola (11782)	1
Aspergillus niger (9642)	8
Aspergillus oryzae (10196-OM #1278)	2
Aspergillus repens (9294)	2
Candida albicans, yeast (11651)	2
Chaetomium globosum (6205)	4
Cladosporium resinae (11274)	0.5
Mucor rouxii	8
Penicillium funiculosum (9644)	1
Phoma clomerata (6735)	1 or less
Phoma pigmentivora (12569)	2
Pullularia pullulans (9348)	0.3
Rhizopus stolonifer (10404)	4
Rhodotorula rubra, yeast (9449)	4
Saccharomyces cerevisiae, yeast (2601)	1
<u>Test Bacteria</u>	
<u>Micobacteria pneumoniae</u>	100
<u>Staphylococcus aureus</u>	95

BEST COPY

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.

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 of addition for the particular product being treated.

1. Fabrics

ULTRA-FRESH AF-5 can be padded on to fabrics from either an aqueous or solvent dispersion. Sufficient ULTRA-FRESH AF-5 should be added to the pad bath to give a fabric pickup of 0.4% to 0.7%w/w.

2. Water-Base Emulsions/Adhesives

Water-base adhesives and related emulsion systems can be rendered resistance to biologically induced instability and degradation by the addition of ULTRA-FRESH AF-5. An application level of 0.25% w/w based on total emulsion weight is recommended. ULTRA-FRESH AF-5 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-5 will last indefinitely in the undiluted adhesive or emulsion.

3. Polymer Systems

Polymeric materials such as vinyl can be rendered resistant to the growth of mildew by the incorporation of ULTRA-FRESH AF-5. Add 0.25% to 0.75% by weight of ULTRA-FRESH AF-5 to the resin mix. The exact amount required for a specific usage can be readily determined by means of a preliminary trial.

Ultrafresh AF-5

BACTERIOSTATIC AND FUNGISTATIC PRESERVATIVE

PRECAUTIONARY STATEMENT: Hazards to humans and domestic animals

Danger. Corrosive. Causes irreversible eye damage and skin burns. Irritant if swallowed or inhaled. Do not get in eyes, on skin or clothing. Wear protective clothing (goggles or face shield, rubber gloves) when handling. Avoid breathing vapor or mist. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Environmental Hazards

This product is toxic to fish. Do not apply directly to water or wet lands. Do not contaminate water by cleaning of equipment or disposal of wastes.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. If plastic do not reuse, empty container.

Pesticide. Spray mixture of this water that cannot be used according to label instructions must be disposed of according to applicable Federal, state or local authorities.

ACTIVE INGREDIENT

Oethylinone,	
2-n-Octyl-4-isothiazolin-3-one.....	5.00
INERT INGREDIENTS.....	95.00
TOTAL.....	100.00

KEEP OUT REACH OF CHILDREN

DANGER

ONLY FOR SALE TO, USE, AND STORAGE BY
SERVICE PERSONS AND INDUSTRIAL USERS

STATEMENT OF PRACTICAL TREATMENT

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 wash contaminated clothing before re-use. If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician. If swallowed, dilute by giving water. Call a physician. Never give anything by mouth to an unconscious person.

MANUFACTURED FOR
THOMSON RESEARCH ASSOCIATES
53 SHAW STREET, TORONTO
ONTARIO, CANADA, M6J 2W3

EPA Est 34310 H101

EPA Reg No 10166-13

Net Contents

U.S. Gallons

10466 33

STORAGE & DISPOSAL

Triple rinse (or equivalent) all containers and, for metal containers, offer for recycling or reconditioning (for plastic containers dispose in an incinerator) or dispose in landfill approved for pesticide containers or bury in a safe place. Consult federal, state or local disposal authorities for approved alternative procedures.

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 paints, latex-, 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, and for the protection of adhesive films against fungal growth. ULTRA-FRESH AF-5 is to be used as directed in the accompanying Technical Data & Product Information sheets.



DOT Proper
CORROSIVE LIQ

(2-n-Octyl-4-

In event

CALL TOLL FREE:

BEST DOCUMENT AVAILABLE

9538-RO

Ultrafresh AF-5

BACTERIOSTATIC AND FUNGISTATIC PRESERVATIVE

ACTIVE INGREDIENT

Octhiline, 2-n-Octyl-4-isothiazolin-3-one.....	5.0%
INERT INGREDIENTS.....	95.0%
TOTAL.....	100.0%

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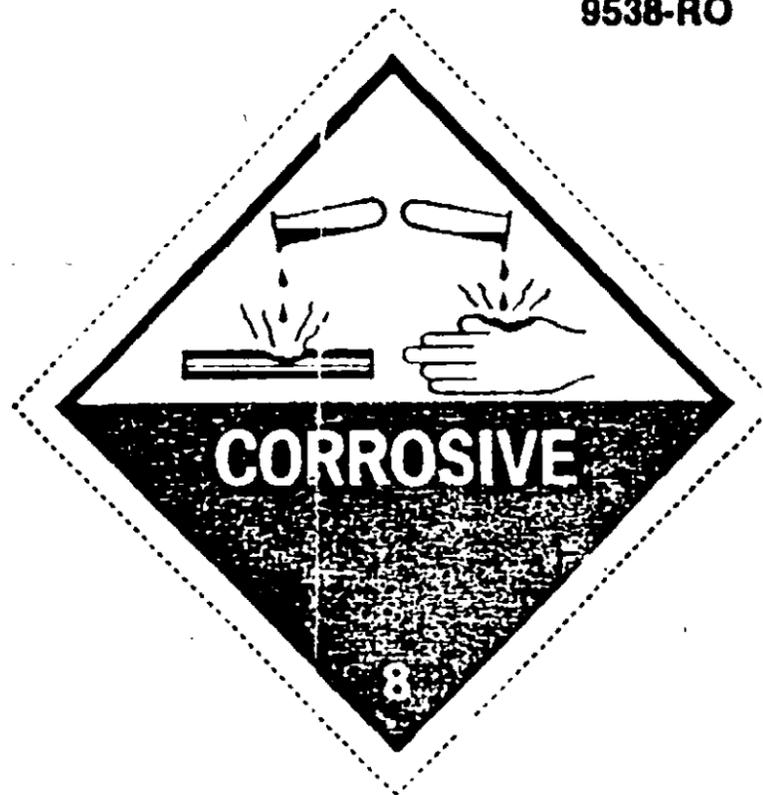
MANUFACTURED FOR
THOMSON RESEARCH ASSOCIATES
53 SHAW STREET, TORONTO
ONTARIO, CANADA, M6J 2W3

EPA Est J4310 H101

EPA Reg No 10466-13

Net Contents

US Gallons 10466 33



DOT Proper Shipping Name
CORROSIVE LIQUID, N.O.S. UN 1760

(2-n-Octyl-4-isothiazolin-3-one)

In event of emergency,

CALL TOLL FREE 800-424-6300 (CHEMTREC)

MADE IN U.S.A.

BEST DOCUMENT AVAILABLE