

39967-31

3/18/2004

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**ACCEPTED**

MAR 18 2004

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 39967-31



**Bayer Chemicals**

**METASOL<sup>®</sup> TK-100**  
**LIQUID CONCENTRATE**

**TO INHIBIT THE GROWTH OF MOLD AND MILDEW ON ADHESIVE FILMS, PAINT FILMS, PAPER PRODUCTS, AND NATURAL AND SYNTHETIC FIBERS AND COATINGS**

**ACTIVE INGREDIENT:**

2-(4-Thiazolyl) Benzimidazole, as the Hypophosphite Salt .....20 %

**OTHER INGREDIENTS**.....80 %

**TOTAL** .....100%

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

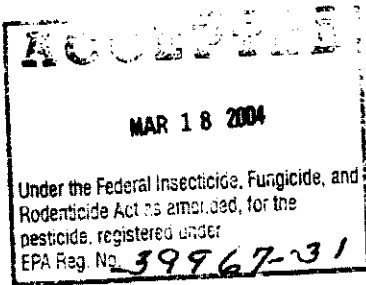
**CAUTION** Harmful if swallowed. Avoid contact with eyes, skin and clothing. Wear rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling.

**FIRST AID**

- **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 by a poison control center or doctor.
- **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- **IF IN EYES:** Hold eyes 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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or ambulances, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.
- Have product material safety data sheet or container (if 5 gal or less) with you when calling a poison control center, or going for treatment.

**IN CASE OF EMERGENCY, CALL: CHEMTREC 800-424-9300**  
**INTERNATIONAL (703)-527-3887**

EPA Reg. No. 39967-31



EPA Establishment # 39967-SC-04  
 Net Contents \_\_\_\_\_ Gallons

**BAYER CHEMICALS CORPORATION**  
 100 Bayer Road  
 Pittsburgh, PA 15205

**STORAGE AND DISPOSAL**

**Do not contaminate food, feed or water by pesticide storage or disposal.**

**PESTICIDE STORAGE**

Keep container closed when not in use.

**PESTICIDE DISPOSAL**

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

**CONTAINER DISPOSAL:**

Do not reuse empty container.

**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:** Dispose as for metal containers. May also be incinerated, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**ENVIRONMENTAL HAZARDS**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other 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.

**DIRECTIONS FOR USE**

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

**ADHESIVE FILMS** The following concentrations must be used to provide mildew control on water-based adhesive films. The concentrations are based on the total adhesive formulation weight. METASOL TK-100 Liquid Concentrate can be incorporated with the make-up water or as a post-additive in adhesive production. Tektamer 38 A.D. or other Bayer preservatives should be incorporated into the aqueous adhesives formulation to inhibit in-can bacterial degradation during shelf storage.

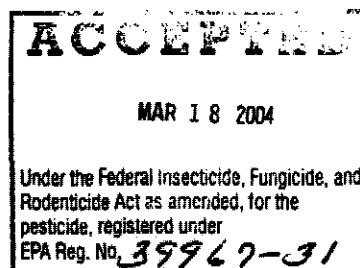
Adhesive Type	% Concentration Metasol TK-100 Liquid Concentrate
Polyvinyl Acetate	0.50-0.75%
Styrene Butadiene	0.25-0.50%
Polyvinyl Alcohol	0.50-0.75%
Methyl Cellulose	0.25-0.75%
Hydroxyethyl Cellulose	0.25-0.75%
Acrylic	0.25-0.50%
Dextrin	0.25-0.50%
Casein	0.75%
Epoxy	0.25-0.50%
Polyester	0.25-0.50%

METASOL TK-100 Liquid Concentrate should not be used where the treated adhesive comes in contact with food packaging materials or on food contact surfaces. Testing should be conducted to assure compatibility with product formulation.

**PAINT FILMS (EXTERIOR)** The active ingredient in METASOL TK-100 Liquid Concentrate has been extensively tested in the laboratory under accelerated weathering conditions and panels have been exposed for periods up to four years at critical mildew locations in the United States. Millions of gallons of paints have been commercially produced and used in homes and industrial installations ranging from the Eastern shore to the Gulf Coast for periods up to five years. Recommendations are based on the successful results of these investigations. Tektamer 38 A.D. or other Bayer preservatives should be incorporated into latex paint formulations to inhibit any bacterial degradation during shelf storage. Testing should be conducted to assure compatibility with product formulation.

**DIRECTIONS FOR USE (continued)**

Paint System	Lb/100 Gal.
PVA	2.5-5.0
Acrylic	2.5-5.0
Vinyl Acrylic	2.5-5.0
Alkyd Modified Latex	5.0-7.5
Zinc Oxide Pigmented Latex	1.25-3.75
Oil House	5.0-7.5
Alkyd	5.0-10.0
Zinc Oxide Pigmented Alkyd & Oil Paints	2.5-5.0



**INTERIORS**

METASOL TK-100 Liquid Concentrate is an effective mildewcide for interior coatings and masonry surface coatings where mold-resistant interior coatings are needed.

METASOL TK-100 Liquid Concentrate should not be used in coatings that come in contact with food. The following recommendations are made.

Interior Paint Systems	Lb/100 Gal
TT-P-0029 Latex Flat.	0.50-1.25
TT-P-650 Latex Primer	1.25-2.50
New York City Housing Authority Coatings	1.25-3.75
Sanitary Latex Semi-Gloss	1.25-5.00
Oleoresinous Interiors	2.50-5.00

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METASOL TK-100 Liquid Concentrate should be incorporated with the TiO<sub>2</sub> in the pigment grind for all paint systems. Testing should be conducted to assure compatibility with product formulation.

**PAPER PRODUCTS**

METASOL TK-100 Liquid Concentrate is most efficiently applied via the size tub or water troughs. METASOL TK-100 Liquid Concentrate is a water-soluble acidic salt solution. If the pH of this solution is raised above 4, the salt reverts to the insoluble 2-(4-Thiazolyl) benzimidazole that will precipitate. The 2-(4-Thiazolyl) benzimidazole is stable and active under a wide variety of pH conditions ranging from highly alkaline to highly acidic. However, once precipitation occurs, pick-up will be poor. The tub size or water trough solutions should be adjusted to a pH below 4.0. The METASOL TK-100 Liquid Concentrate should then be added with thorough agitation. It has been shown that the resulting pH has no adverse effects on the properties of the starch, equipment, or physical properties of the final product. The METASOL TK-100 Liquid Concentrate should be applied at dosage levels from 200 to 1000 ppm active ingredient based on the finished paper weight. For use in a coating color the METASOL TK-100 Liquid Concentrate should be added with agitation to the make-up water. Although subsequent raising of the pH with the binder or alkali will precipitate the 2-(4-Thiazolyl) benzimidazole. This precipitate will be evenly distributed throughout the coating color. The use of METASOL TK-100 Liquid Concentrate in coating colors is recommended in addition to treatment of the base stock.

METASOL TK-100 Liquid Concentrate is a fungicide only. Tektamer 38 A.D. or other Bayer preservatives should be incorporated into sizing solutions to inhibit any bacterial degradation during shelf storage.

**Note:** METASOL TK-100 Liquid Concentrate should be used only for the manufacture of non-food grade paper products. METASOL TK-100 Liquid Concentrate has not been cleared for use in paper or paperboard products intended for use in contact with food.

**CANVAS TEXTILES**

METASOL TK-100 Liquid Concentrate is an effective product that has been used successfully in providing mold and mildew resistance to canvas textiles. The simplest treatment method is to prepare a trough with water at pH 3-4 and then add the METASOL TK-100 Liquid Concentrate to obtain the desired concentration. The fabric is passed through the solution until the proper amount of solution is absorbed on the fabric. A wetting agent may be used to aid the solution in penetrating the fabric. The METASOL TK-100 Liquid Concentrate should be applied at dosage levels from 500 to 3000 ppm active ingredient based on finished fabric. The amount necessary to provide the desired protection against mold and mildew can then be determined. If deposition of METASOL TK-100 Liquid Concentrate onto the canvas is desired, a subsequent wash with 1% soda ash solution will suffice. This can be followed by normal processing steps of the canvas textile. METASOL TK-100 Liquid Concentrate should be used for manufacture of canvas textiles only, such as tents and awnings.

**NYLON CARPETING**

Using spin finish application, add 0.25 -1.00% METASOL TK-100 Liquid Concentrate based on total weight of the material being used.

Notice: Seller expressly warrants that the product conforms to its chemical description. There are no warranties associated with the sale of this product expressed or implied, including, but not limited to the warranties of fitness for a particular purpose of merchantability.

® Metasol is a registered trademark of Bayer Chemicals Corporation

Active ingredient manufactured in India.

