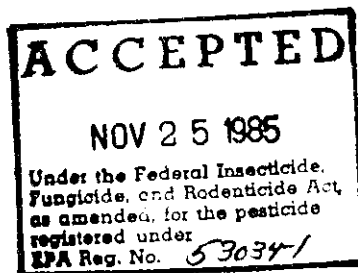


THOR

THOR PMA 100

ORGANO MERCURY

FUNGICIDE
BACTERICIDE



Can Protection

Emulsion paints contain water, water soluble colloids and essential salts and are therefore ideal media for the growth of micro organisms. Spoilage can be caused by both bacteria and fungi.

Bacterial infection is shown by gas evolution, viscosity loss, or a putrid odor. The faults may occur singly or in combination, depending on the type of nutrient and micro organism.

Fungal spoilage usually occurs on the surface of the paint and although rarely altering paint properties will certainly detract from sales appeal. A few types of fungi can occur in the body of the paint, and cause viscosity loss.

Thor PMA 100 controls all these conditions, adds no odor to a paint and does not alter color, either on initial manufacture or on storage.

Thickeners

Preservation of Stock Solutions

Where water soluble thickeners are prepared and then stored it is necessary to add a preservative to prevent spoilage.

Sodium carboxymethyl cellulose and methyl cellulose may be preserved by the addition of 0.01% Thor PMA 100.

Hydroxy ethyl and hydroxy propyl cellulose require up to 0.005% depending on the grade.

Solutions of casein should be preserved by the addition of 0.3% PMA 100.

Film Protection

Thor PMA 100 controls fungus growth on the dry paint film--this efficiency is reduced by U.V. or exposure to rain.

Quantities of Use

Thor PMA 100 should not be used with lithopone or sulfide pigments.

An addition of 0.06% of the total paint weight will control fungal growth of the paint film and at the same time ensure can stability. If can stability only is required, a quantity of 0.02% is sufficient, but this will provide only a small measure of film protection.

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The quantities of 0.06% and 0.02% are for a normal polyvinyl acetate emulsion paint of 60% PVC, applied in an average environment. Where the paint or the environment departs from normal conditions, the quantity of PMA 100 should be varied. The way in which this is varied is shown in the table headed "Quantity Selector."

Method of Use

Thor PMA 100 should be added to the finished paint or to any intermediate liquid stage. The addition should be made while the paint is being stirred.

Handling

1. Handle gently and avoid spilling.
2. Wear goggles and rubber gloves.
3. After handling, and particularly prior to eating, drinking or smoking, wash hands thoroughly with soap and water.

Toxicity

The concentrations recommended for use in paints ensure that neither the paint nor the film present any health hazards.

Thor PMA 100 Quantity Selector (refer to attached tables)

The tables on the following page show how the components and end use of a paint affect the quantity of preservative.

The quantity of preservative required for can protection can be determined with accuracy and an upper limit fixed--film protection increases as the percentage of preservative increases. Generally, the amount of preservative required to give can protection only, does not provide significant film protection.

It might appear that the polymer affects the quantity of preservative required, but this is not so. In this respect the factors affecting microbiological growth are colloids and chemicals used in the production of the latices and emulsions. As the manufacturers rarely divulge these components, the selection must be made by reference to the polymer type. In practice, polymer types are associated with certain chemicals and colloids and, therefore, the quantity may be determined on the basis of the polymer.

Field trials on outdoor exposure panels show that temperature and humidity are not the only factors determining mold growth. The occurrence of specific mold types in northern latitudes means that a high level of preservative is required to protect the film--this is in spite of the fact that the area may have low temperatures and humidities.

Reference to the table will show that only the type of colloid is considered and not the quantity. The presence of easily metabolized colloids increases the susceptibility to bacterial degradation, irrespective of quantity.

THOR PMA 100 - CAN PROTECTION ONLY

The paint contains:	The paint is based on			
	<u>ACRYLIC</u>	<u>POLYVINYL ACETATE COPOLYMER</u>	<u>STYRENE BUTADIENE</u>	<u>PROTEIN</u>
Carboxy methyl cellulose	PVC < 45 — 0.02	0.02	0.02	0.06
	PVC > 45 — 0.03	0.03	0.03	0.06
Ethyl hydroxy ethyl cellulose	PVC < 45 — 0.01	0.01	0.03	0.06
	PVC > 45 — 0.01	0.014	0.03	0.06
Methyl cellulose	PVC < 45 — 0.01	0.014	0.03	0.06
	PVC > 45 — 0.01	0.014	0.03	0.06
Protein	0.06	0.06	0.06	0.06

THOR PMA 100 - FILM AND CAN PROTECTION

The paint will be applied to:	The paint will be applied in the climatic conditions of			
	<u>TROPICAL RAIN</u>	<u>TROPICAL LOW HUMIDITY</u>	<u>TEMPERATE</u>	<u>BETWEEN LATITUDES 50°N AND 70°N</u>
Breweries, food factories, dairies	0.2	0.1	0.08	0.1
Unprimed wood	0.2	0.08	0.1	0.16
Wood primed with primer having good fungicidal properties	0.08	0.06	0.06	0.08
Stone, cement, concrete	0.06	0.04	0.06	0.06
Indoor plaster	0.06	0.02	0.02	0.04

The information contained in this leaflet is intended to be of assistance to users but is without guarantee. Variations can occur in application and users are advised to conduct their own test. Suggestions for use neither give nor imply any freedom from patent infringement.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER - POISON



Fatal if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco.

Fatal if absorbed through skin. Do not get in eyes, on skin or on clothing. Wear protective clothing and rubber gloves. Remove contaminated clothing and wash before reuse.

Fatal if inhaled. Do not breathe dust. Wear a dust respirator to clean up spills from burst containers.

Do not get in eyes. Wear goggles, face shield or safety glasses.

ENVIRONMENTAL HAZARDS

THIS PRODUCT IS TOXIC TO FISH AND WILDLIFE. DO NOT APPLY DIRECTLY TO WATER. DO NOT CONTAMINATE WATER BY CLEANING OF EQUIPMENT OR DISPOSAL OF WASTES.

