



DSC TECHNICAL BULLETIN 04- 03

Subject: Mildew and Oil-Base Paint

Discussion:

We have experienced a number of historic preservation jobs that have recurrent mildew problems, particularly when located in damp and humid parts of the country. The mildew can be removed with a variety of products on the market, including diluted household bleach, only to return in a couple days or weeks. One of the primary causes is the oil-base paint that has been either historically or recently applied. A publication by the Forest Products Society¹ defines one of the primary culprits as:

“Natural oils such as linseed oil and tung oil are food for mildew. If these oils are applied to wood without a mildewcide, they can encourage mildew growth.”

When assessing mildew problems, one of the first things to research is the type of paint used as a top coat and primer. If historic linseed oil-base paint has been used (Modern Alkyd-based paints are essentially linseed oil-based paint with the lead removed), it will continue to feed the mildew despite the application of mildewcide. It has been our experience, in extremely damp areas, that application of both mildewcide and water-base paint over *existing* oil-base paint is still only a temporary measure, since the linseed oil is still present. Complete removal of the oil-base paint may be the only recourse for a permanent solution.

Recommendation:

1. In high humidity environments, old oil-base paint may need to be removed prior to the application of new acrylic latex paint to permanently keep mildew from growing.
2. Pretreat bare wood with a Water-Repellent Preservative (also available commercially). For do-it-yourselfers, use the following recipe:

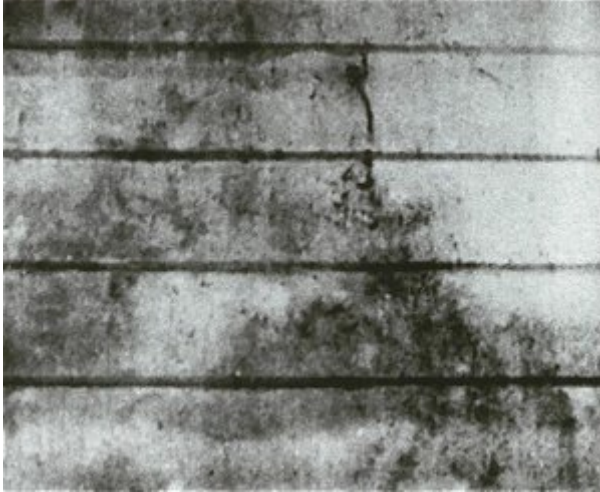
Ingredients ²	Approximate Composition (percent by weight)	
	Water Repellent	Water Repellent Preservative
Preservative (fungicide)	0	0.25
Resin or drying oil	10	10
Paraffin wax	0.5-1	0.5-1
Solvent (turpentine, mineral spirits, or paint thinner)	89	84-89

¹ *Finishes for Exterior Wood*, 1996, Williams, Knaebe, Feist, Forest Products Society, Madison, WI

² *IBID*

3. Use 100% acrylic latex opaque primers and top coats for siding, soffits, windows, doors, and trim. (Alkyd-base paint is still preferable for high traffic or high use areas like porch decking, railings, or columns).

Images:



Mildew on siding

<http://www.forestprod.org/shop/index.html>

Finishes for Exterior Wood: Selection, Application, and Maintenance



This manual contains definitive, practical information on the proper selection, application, and maintenance of exterior wood finishes, including:

- How manufacturing, design, and construction practices affect the surfaces of exterior wood products.
- How various types of finishes interact with wood surfaces.
- How weathering affects the wood and finished surface.
- How to select and apply various exterior wood finishes.
- How degradation and discoloration of exterior wood finishes occur and what methods can be used to prevent these problems.

Finishes for Exterior Wood is an invaluable resource not only for finish applicators, but also for designers of exterior wood structures interested in understanding the various mechanisms that affect the service life of finished exterior wood products.