

Use of Paints and Preservatives in the Greenhouse

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Paints and wood preservatives, designed to maintain the appearance and integrity of the greenhouse, must be able to withstand and protect surfaces from sunlight and extremes of temperature and humidity. They should be safe for use around plants and workers, resist mildew, and in the case of wood preservatives, protect against insect and fungal attack.

All surfaces should be clean and dry before application. Test for mildew with a 1:1 bleach:water spray. If mildew is present it will turn a light grey color. Mildew can be scrubbed off 30 minutes after spraying with a mixture of 3 oz trisodium phosphate (Oakite, Soilax, Spic & Span), 1 qt household bleach, and 3 qt warm water.

GREENHOUSE PAINTS

Paints to be used in the greenhouse should be explicitly labeled for this purpose. Since plants are particularly sensitive to fumes from xylene and toluene solvents, formulations with these ingredients should never be used in or near where plants are or will be grown. Other volatile materials are known to cause growth regulator effects on certain plants, therefore paints, stains and other coatings not labeled for greenhouse use are best avoided. Apply paints only when the greenhouse can be ventilated until the paint has thoroughly dried. Do not use metallic (such as aluminum) paint on heating pipes.

WOOD PRESERVATIVES

A wood preservative, as defined in New York State, is a coating "formulated to protect wood from decay or insect attack and which is registered as a pesticide product with the United States Environmental Protection Agency." Probably the most common coating material used in greenhouses is copper naphthenate (e.g. green Cuprinol No. 10™, CNS™), for above- or below-ground uses. It increases resistance to insect attack (termites, powder post beetles, carpenter ants), fungal decay and algal growth and is usually sprayed or brushed on or used as a dip. A brush treatment may add one to three years of life, while dipping (with 1/10 to 1/8 in. penetration) may add 5 to 10 years. The green color may bleed through paints applied over the treatment. Some formulations of zinc naphthenate (e.g. ZNS™) may be available for interior surfaces to be painted. Never use the restricted materials pentachlorophenol or creosote in or near greenhouses. They give off volatiles that are extremely phytotoxic for a long period of time. Two coats of either B.I.N™ primer-sealer or a two-phase epoxy paint have been reported effective in sealing in pentachlorophenol fumes, but **ALL** surfaces must be treated.

Chromic copper arsenate (CCA) is one material used for pressure treating (Wolmanizing) lumber. CCA may be the most practical option where long-term preservation is desirable and retreatment impractical. CCA salts bind with wood fibers and leaching has not been a problem. For greenhouses, the 0.40 rating (lb of CCA retained per cu ft of wood) is recommended for above and below ground,

Table 1. Comparison of prices for clear retail 1 × 8 in. lumber per linear foot

Western red cedar	Redwood	Cypress	CCA (.40)
\$1.69	\$1.68	\$2.60	0.66

which should last from 30 to 40 years. Treat new cut lumber ends with a copper naphthenate preservative.

Avoid breathing dust from saw cuts and never burn CCA-treated wood, since toxic fumes may be produced. Wash hands after working with CCA, and wash work clothes that have contacted CCA separately.

CCA-treated lumber or copper naphthenate-coated wood should be rinsed at least six times and then thoroughly dried for a week before use. Be sure rinse water can entirely drain off and not collect and concentrate salts on the wood surface. Place spacers between stacks of wood for aeration while rinsing and drying.

Certain heartwoods are naturally resistant to decay and can last 20 to 30 years or more, but availability and price make CCA a more desirable option. Table 1 compares recent (12/91) prices for clear retail 1 × 8 in. lumber, per linear foot.