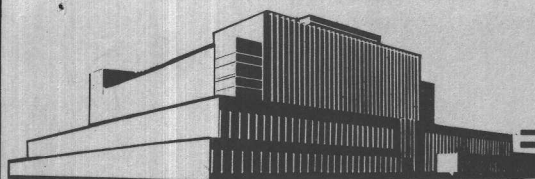


# List of Publications on WOOD FINISHING SUBJECTS

May 1960

(Report)

No. 454



FOREST PRODUCTS LABORATORY

MADISON 5, WISCONSIN

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

In Cooperation with the University of Wisconsin

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## INSTRUCTIONS FOR OBTAINING PUBLICATIONS

Publications available for distribution at this Laboratory are marked with an asterisk (\*).

Single copies of technical notes, reprints, and processed reports may be obtained free upon request from the Director, Forest Products Laboratory, Madison 5, Wis.

Federal Government bulletins, circulars, and leaflets, if not available for free distribution at this Laboratory, may be purchased at the price indicated from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Send money order, draft, or cash; stamps or personal checks are not accepted.

Trade journals containing articles herein listed may be purchased from the publishers or consulted in various libraries.

The Forest Products Laboratory reserves the right to furnish only those publications which in its judgment will give the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled except in unusual cases.

## General

Paints for exteriors of houses, by D. F. Laughnan. The Mag. of Prefabrication 6(3):36-39, Mar. 1958.

What's new in wood finishes? by F. A. Streng. NAHB Jour. of Homebuilding 12(5):41-42, May 1958.

Painting frame buildings, by D. F. Laughnan. Am. Railway Eng. Assn. Proc. 1956, Vol. 57, pp. 1025-1036.

\*Wood siding, how to install it, paint it, care for it. U. S. Dept. Agr. Home and Garden Bull. No. 52, Oct. 1956.

\*Paints for exterior wood surfaces, by D. F. Laughnan. FPL Rept. No. 2069, 1956.

\*When and how to paint homes and farm buildings, by F. L. Browne. The President's Conference on Home Building and Home Ownership, Final Reports of Committees, V. 7, Farm and Village Housing, p. 102, 1932.

\*Same: FPL Rept. No. 962, information reviewed and reaffirmed, 1953.

Paints and painting. Chapter 7 in "Manual on Wood Construction for Prefabricated Houses," prepared by Forest Products Laboratory and the Housing and Home Finance Agency, 1947. Manual available from the Superintendent of Documents, GPO, Washington 25, D. C., for \$1.50, cash or money order.

\*Painting and finishing wood. Separate from the Forest Products Laboratory's "Wood Handbook," USDA No. 72. ("Wood Handbook" is available from Superintendent of Documents, Government Printing Office, Washington 25, D. C. for \$2.00 each.)

## The Weathering of Wood

\*Effect of resin treatment and compression upon the weathering properties of veneer laminates, by R. A. Lloyd and A. J. Stamm. Forest Products Jour. 8(8):230-235, Aug. 1958.

\*The penetration of light into wood, by F. L. Browne and H. C. Simonson. Forest Products Jour. 7(10):308-314, Oct. 1957.

\*Weathering and decay. FPL Tech. Note No. 221, 1956.

\*Wood siding left to weather naturally, by F. L. Browne. Architectural Record, V. 112, No. V, p. 197, Nov. 1952.

## Painting Characteristics of Wood

\*Effects of wood on durability of finishes, by D. F. Laughnan. Forest Products Jour. 9(2):19A-21A, Feb. 1959.

\*Exudation of pitch and oils in wood, by F. L. Browne and R. C. Rietz. FPL Rept. No. 1735, 1959.

## Painting Characteristics of Wood (continued)

\*Paint performance on forest products, by F. L. Browne and D. F. Laughnan.

FPL Rept. No. 1926, 1952.

Same. Modification of wood and plywood to improve paintability. Forest Products Res. Soc. Jour. 2(3):3-24, May 1952.

\*Wood properties that affect paint performance, by F. L. Browne. FPL Rept. No. 1053, information reviewed and reaffirmed, 1958.

Same, Chap. 18 in "Protective and Decorative Coatings," edited by J. J. Mattiello, Office of the Quartermaster General, Washington. Government Printing Office, 1945.

Wood properties and paint durability, by F. L. Browne. USDA Misc. Pub. No. 629, 1947. 10 cents.

Effect of extractive substances in certain woods on the durability of paint coatings, by F. L. Browne. Indus. & Eng. Chem. 28:416, Apr. 1, 1936.

Same. Discussion by F. L. Browne. Natl. Paint Bull. 3(2):5, Feb. 1939.

## Special Primers and Priming Procedures

Effect of aluminum priming paint on the durability of house paints on wood, by F. L. Browne. Indus. & Eng. Chem. 26:369, Apr. 1934.

## Composition of Paint

Swelling of paint films in water (by F. L. Browne):

\*Part I, The absorption of water, swelling and solubility of free films of paint. Preprint of paper for 7th Annual Meeting of Forest Products Res. Soc., Memphis, Tenn., June 15-17, 1953.

\*Part II, Absorption and volumetric swelling of bound and free films before and after weathering. Jour. of the Forest Products Res. Soc. 4(6):391-400, Dec. 1954.

\*Part III, Absorption and volumetric swelling of bound and free films from air of different relative humidities. Forest Products Jour. 5(1):92-96, Feb. 1955.

\*Part IV, Effect of thickness of film and pigment volume of paint. Forest Products Jour. 5(2):142-146, Apr. 1955.

\*Part V, Effects of different pigments. Forest Products Jour. 5(3):192-200, June 1955.

\*Part VI, Effects of different oil or oleoresinous vehicles. Forest Products Jour. 6(4):152-159, Apr. 1956.

\*Part VII, Latex vehicles. Forest Products Jour. 6(6):235-240, June 1956.

\*Part VIII, Swelling of linseed oil paints in water and organic liquids. Forest Products Jour. 6(8):312-318, Aug. 1956.



## Composition of Paint (continued)

Swelling of paint films in water (by F. L. Browne): (continued)

\*Part IX. Effects of temperature during soaking and film formation, and repeated soaking and drying. Forest Products Jour. 6(10): 453-458, Oct. 1956.

\*Part X. Rate of penetration of water, permeability to water vapor, and the penetrability to air in relation to water absorption. Forest Products Jour. 7(4):145-54, Apr. 1957.

\*Part XI. Mixed-pigment paints in linseed oil. Forest Products Jour. 7(7):248-52, July 1957.

Durability of red iron oxide barn paints, by D. F. Laughnan. Ag. Eng. 37(3): 188-189, March 1956.

\*Fire-retardant paints containing borax. FPL Tech. Note No. 249, 1952.

\*Water-thinned emulsion paints for exterior wood, by F. L. Browne. TP-92, 1959.

## Technique of Applying Paint

\*Spray versus brush painting for houses and farm buildings. TP-56, revised Aug. 27, 1956.

\*The two-coat system of house painting, by F. L. Browne. Indus. & Eng. Chem. July 1941. Same: FPL Rept. No. 1259, revised 1958.

## Technique of Maintaining Paint

Effect of coating thickness on the performance of house paints under different programs of maintenance, by F. L. Browne and D. F. Laughnan. Fed. Paint & Varn. Produc. Clubs Official Digest No. 338, Mar. 1953.

\*Plastic or mastic coverings for exterior walls of houses, by F. L. Browne. FPL Rept. No. 1937. 1958.

\*How often should a house be painted: An experimental study of programs of paint maintenance, by F. L. Browne and D. F. Laughnan. Paint, Oil & Chem. Rev. 115(16):16-18, 32-35, July 31, 1952; and 115(17):26,42, 44-47, Aug. 14, 1952; Same: Forest Products Res. Soc. Jour. Vol. II, No. 5, Dec. 1952.

\*The program of paint maintenance for the frame house, by F. L. Browne. FPL Rept. No. 1127, information reviewed and reaffirmed, 1954.

Repainting paint-neglected frame houses, by F. L. Browne. Nat. Painters Mag. 2:15, Apr.; 14, May; 6, June 1935.

### Paint Failures When Wood Becomes Wet

- \*Understanding the mechanisms of deterioration of house paint, by F. L. Browne. Forest Products Jour. 9(11):417-427, Nov. 1959.
- \*Insulation and ventilation prevent condensation in barns, by L. V. Teesdale and M. E. Dunlap. FPL Rept. No. 1720, 1959.
- \*Condensation problems in modern buildings, by L. V. Teesdale. FPL Rept. No. 1196, 1959.  
Same: Northwest Architect, Mar.-Apr. 1939; Domestic Eng., Apr. 1939; Building Supply News, Apr. 1939.
- \*Paint peeling--causes and cures, by D. F. Laughnan. TP-70, 1958.
- \*Condensation problems in farm buildings, by L. V. Teesdale. FPL Rept. No. 1186, information reviewed and reaffirmed, 1958.
- \*Moisture condensation in barns, by L. V. Teesdale. FPL Rept. No. 1231, information reviewed and reaffirmed, 1956.
- \*Remedial measures for building condensation difficulties, by L. V. Teesdale. Presented at Humidity & Comfort Symposium, Pennsylvania State College, State College, Pa., Sept. 30, 1947. FPL Rept. No. 1710, revised 1955.
- \*Some causes of blistering and peeling of paint on house siding, by F. L. Browne. Amer. Paint & Varnish Mfrs. Assn., Sci. Sec., Cir. 317, p. 480, Oct. 1927; Same: FPL Rept. No. 6, information reviewed and reaffirmed, 1953.

### Technique of Exposure Testing

- \*A new device for studying the blister resistance of house paints, by F. L. Browne and D. F. Laughnan. Forest Products Jour. 10(3):141-145, March 1960.
- Testing house paints for durability, by F. L. Browne. Jour. Chem. Education, 10:529, Sept. 1933.

### Coatings for Retarding Moisture Movement

- \*Moisture content of wood as related to finishing of furniture, by F. L. Browne. Presented at Wood Seasoning Conference, Asheville, N.C., Oct. 2-3, 1947. FPL Rept. No. 1722, information reviewed and reaffirmed, 1959.
- \*Coatings that prevent end checks. FPL Tech. Note No. 186, revised 1959.
- \*Aluminum paints. FPL Tech. Note No. 228, revised 1952.
- \*Coatings for minimizing changes in the moisture content of wood. FPL Tech. Note No. 181, revised 1952.

## Coatings for Retarding Moisture Movement (continued)

- \*Uneven coatings on wood cause warping. FPL Tech. Note No. D-12, revised 1952.
- Coatings for wood, by F. L. Browne. Modern Plastics Encyclopedia V. 1, p. 510, 1947.

## Clear or Natural Finishes for Exteriors of Houses

- \*Common questions about the Forest Products Laboratory natural finish, by V. P. Miniutti. TP-93, 1960.
- \*Forest Products Laboratory natural finish. FPL Rept. No. 2096, 1957.
- \*Making log cabins endure (suggestions on preservatives, chinking, and finishes). FPL Rept. No. 982, revised 1956.
- \*Natural wood finishes for exteriors of houses, by D. F. Laughnan. Preprint Forest Products Res. Soc. 8th An. Meeting, Grand Rapids, Mich., May 1954.
- Natural wood finishes for exteriors of houses, by F. L. Browne. Natl. Real Estate & Bldg. Jour. 52(11):36, 47, Oct. 1951. Arch. Record, 111(2): 196-198, Feb. 1952.

## Water Repellents and Water-Repellent Preservatives

- Water-repellent preservatives help maintain paint, by L. V. Teesdale. Hoard's Dairyman 100(9):474-475, May 10, 1955.
- \*Water-repellent preservatives reduce rain-caused paint blistering on wood siding, by L. V. Teesdale. FPL Rept. No. 1990, 1959.
- \*A survey of the properties of commercial water repellents and related products, by F. L. Browne and L. E. Downs. FPL Rept. No. 1495, 1960.
- \*Preservative treatment of window sash and other millwork, by F. L. Browne. FPL Rept. No. 919, information reviewed and reaffirmed, 1958.
- Uses for water-repellent preservatives, by F. L. Browne. Ry. Eng. & Maintenance 46(12):1140, Dec. 1950.
- \*Water-repellent preservatives for wood, by F. L. Browne. Arch. Record 103(3):131-132, 174, illus., March 1949.
- Preserve, prime, and paint, by F. L. Browne. Ry. Eng. & Maintenance 44(6):613, June 1948.
- Nomenclature and definitions of wood preservatives and wood coatings. Amer. Paint Jour. 33(4):38, Oct. 18, 1948; Same: Paint & Varnish Production Manager 28(11):330, Nov. 1948; Paint, Oil & Chem. Rev. 111(22):48, Oct. 28, 1948.



### Painting Treated Wood

\*The preservative treatment and staining of shingles, by F. L. Browne. FPL Rept. No. 761, information reviewed and reaffirmed, 1953.

Durability of paint on wood treated with zinc chloride, by F. L. Browne. Amer. Wood Preservers' Assn. Proc., p. 410, 1934. Same: Ry. Eng. & Maintenance 30:81, Feb. 1934.

### Interior Wood Finishing

\*Finishing and maintaining wood floors, by F. L. Browne. FPL Rept. No. 2169, 1959.

\*Some books and pamphlets on finishing of wood and furniture. FPL Tech. Note No. 195, revised 1956.

\*Bleaching wood, by L. E. Downs. FPL Rept. No. 1705, information reviewed and reaffirmed, 1956.

### Miscellaneous

\*Some books about wood (a list). FPL Rept. No. 399, revised 1955.

\*A hundred definitions pertaining to wood and other forest products. FPL Tech. Note No. 240, 1958.

\*The Forest Products Laboratory. A 16-page pictorial outline of the activities of this research institution.

OTHER PUBLICATION LISTS ISSUED BY

THE FOREST PRODUCTS LABORATORY

The following lists of publications which deal with the other investigative projects of the Forest Products Laboratory are obtainable upon request:

Boxing and Crating -- Strength and serviceability of shipping containers, methods of packing.

Building Construction Subjects -- Partial list of Government publications of interest to architects, engineers, builders, and retail lumbermen.

Chemistry of Wood and Derived Products -- Chemical properties and uses of wood and chemical wood products, such as turpentine, alcohol, and acetic acid.

Fire Protection -- Fire test methods, fire retarding chemicals and treatments and fire behavior of treated and untreated wood, wood products, and wood structures.

Fungus Defects in Forest Products -- Decay, stains, and molds in timber, buildings, and various wood products; antiseptic properties of protective materials.

Furniture Manufacturers, Woodworkers, and Teachers of Wood Shop Practice -- Partial list of Government publications on growth, structure, and identification of wood; moisture content, physical properties, air seasoning, and kiln drying; grading, manufacturing, and waste utilization; strength and related properties and joints and fastenings; glues and gluing, veneer, and plywood fabrication; box and crate construction and packaging data.

Glue and Plywood -- Development of waterproof glues, preparation and application of various glues, plywood manufacturing problems.

Growth, Structure, and Identification of Wood -- Structure and identification of wood; the effect of cellular structure of wood on its strength, shrinkage, permeability, and other properties; the influence of environmental factors, such as light, soil, moisture, and fire, on the quality of wood produced; and secretions of economic value produced by trees and their exploitation.

OTHER PUBLICATION LISTS ISSUED BY THE

FOREST PRODUCTS LABORATORY (continued)

Logging, Milling, and Utilization of Timber Products -- Methods and practices in the lumber-producing and wood-consuming industries; standard lumber grades, sizes, and nomenclature; production and use of small dimension stock; specifications for small wooden products; uses for little-used species and commercial woods, and low-grade and wood waste surveys.

Mechanical Properties of Timber -- Strength of timber and factors affecting strength; design of wooden articles or parts where strength or resistance to external forces is of importance.

Pulp and Paper -- Suitability of various woods for pulp and paper, fundamental principles underlying the pulping and bleaching processes; methods of technical control of these processes; relation of the chemical and physical properties of pulps and the relation of these properties to the paper making qualities of the pulps; waste in the industry, for example, decay in wood and pulp; utilization of bark, white water losses, etc.

Seasoning of Wood -- Experimental and applied kiln drying, physical properties, air drying, steam bending.

Structural Sandwich, Plastic Laminates, and Wood-Base Aircraft Components -- Strength, selection, and character of aircraft wood, plywood, and wood and composite laminated and sandwich materials; fabrication and assembly problems; methods of calculating the strength.

Wood Preservation -- Preservative materials and methods of application; durability and service records of treated and untreated wood in various forms.

Note: Since Forest Products Laboratory publications are so varied in subject matter no single big list is issued. Instead a list is made up for each Laboratory division. Twice a year, December 31 and June 30, a list is made up showing new reports for the previous 6 months. This is the only item sent regularly to the Laboratory's mailing list. Anyone who has asked for and received the proper subject lists and who has had his name placed on the mailing list can keep up to date on Forest Products Laboratory publications. Each subject list carries descriptions of all other subject lists.