

**PRODUCT STANDARD PS27-70  
MOSAIC-PARQUET HARDWOOD SLAT FLOORING**

Product Standard PS27-70, Mosaic-Parquet Hardwood Slat Flooring was withdrawn by the Department of Commerce on January 20, 1982.

This product standard was replaced by American National Institute Standard/American Parquet Association, ANSI/APA 1-1984, Mosaic-Parquet Hardwood Slat Flooring.

For technical information and assistance concerning this standard contact directly American National Standards Institute (ANSI), 1430 Broadway, New York, New York, USA 10018; Telephone: (212) 642-4982 regarding construction, Fax: (212) 398-0023.

The following organization may be able to provide additional assistance: Resilient Floor Covering Institute (RFCI), 966 Hungerford Drive, Suite 12-B, Rockville, Maryland USA 20805; Telephone: (301) 340-8580; Fax: (301) 340-7283.

possible in terms of quality, quantity, timeliness and efficiency.

Include the principal costs involved for achieving work plan under Cooperative Agreement by completing Part III—the Budget Information Section of the Request for Application.

Provide cost sharing plan information in terms of methodology and format for billing the cost of management and technical assistance to clients.

Total project cost will be evaluated in terms of:

—Clear explanations of all expenditures proposed, and

—The extent to which the applicant can leverage federal program funds and operate with economy and efficiency.

In conclusion, the applicant's schedule for start of BDC operation should be included in Part Two. Part Two will be known as the applicant's plan of operation and will be incorporated into the Cooperative Agreement award.

A detailed justification all proposed costs is required for Part Four and each item must be fully explained.

The failure to supply information in any given category of the criteria will result in the application being considered non-responsive and consequently, dropped from competition.

All information submitted is subject to verification by MBDA.

#### E. Disposition of Proposals

Notification of awards will be made by the Grants Officer. Organizations whose proposals are unsuccessful will be advised by the Regional Director.

#### F. Proposal Instructions and Forms

Questions concerning the preceding information and copies of application forms can be obtained at the above address.

Nothing in this solicitation shall be construed as committing MBDA to divide available funds among all qualified applicants. The program is subject to OMB Circular A-85 requirements.

G. A Pre-Application conference to assist all interested applicants will be held at the Federal Building—536 South Clark Street—Room 638 A & B—Chicago Illinois on February 8, 1982 at 10:00 a.m.

(11,800 Minority Business Development (Catalog of Federal Domestic Assistance))

Dated: January 12, 1982.

Stanley W. Tate,  
Regional Director.

(FR Doc. 82-1982 Filed 1-19-82; 8:45 am)  
BILLING CODE 2610-01-21

### National Bureau of Standards

#### Status Report on Voluntary Product Standards

AGENCY: National Bureau of Standards; Commerce.

ACTION: Maintenance, retention, replacement, and withdrawal of certain voluntary product standards

On August 19, 1980, the Department of Commerce (Department) announced in the Federal Register (45 FR 55250-2) the status of 80 documents classified as Voluntary Product Standards. The announcement was made in accordance with the revised Procedures for the Development of Voluntary Product Standards (15 CFR Part 10). Section 10.0(b) of the Procedures specifies six criteria that must be met for the Department to sponsor the development or maintenance of a Voluntary Product Standard.

Numerous requests to retain or maintain various standards were received in response to the August 19, 1980, notice. A number of the requests specified retention of standards for fixed periods of time that have now elapsed. The current status of all such standards is indicated below.

Based on proposals from the proponent organizations identified after the following titles, the following product standards will continue to be sponsored by the Department:

PS 1-74, Construction and Industrial Plywood; American Plywood Association  
PS 20-70, American Softwood Lumber Standard; American Lumber Standards Committee  
PS 72-76, Toy Safety; Toy Manufacturers of America  
PS 73-77, Carbonated Soft Drink Bottles; Glass Packaging Institute  
TS 231, Proposed Voluntary Product Standard, Production of Carbonated Soft Drinks in Glass Bottles; National Soft Drink Association

Based on documented activity within a private standards-writing organization, the following standards will be retained by the National Bureau of Standards for the periods of time stated below to permit the orderly transfer of sponsorship of such standards from the Department to the identified organizations. The periods of time stated below shall commence from the date this notice is published in the Federal Register and supersede the periods of time stated for those standards in the August 19, 1980 notice.

PS 30-70, School Chalk; the Crayon, Water Color and Craft Institute, Inc.; 6 months  
PS 36-70, Body Measurements for the Sizing of Boys' Apparel; Mail Order Association of America; 12 months

PS 42-70, Body Measurements for the Sizing of Women's Patterns and Apparel; Mail Order Association of America; 12 months  
PS 45-71, Body Measurements for the Sizing of Apparel for Young Men (Students); Mail Order Association of America; 12 months  
PS 46-71, Flame-Resistant Paper and Paperboard; American Society for Testing and Materials; 6 months  
PS 51-71, Hardwood and Decorative Plywood; Hardwood Plywood Manufacturers Association; 12 months  
PS 54-72, Body Measurements for the Sizing of Girls' Apparel; Mail Order Association of America; 12 months  
PS 63-75, Latex Foam Mattresses for Hospitals; American Society for Testing and Materials; 12 months  
PS 64-75, School Past; The Crayon Water Color and Craft Institute, Inc.; 6 months  
PS 65-75, Paints and Inks for Art Education in Schools; The Crayon, Water Color and Craft Institute, Inc.; 6 months  
PS 67-76, Marking of Gold Filled and Rolled Gold Plate Articles Other Than Watchcases; Jewelers Vigilance Committee; 24 months  
PS 68-76, Marking of Articles Made of Silver in Combination with Gold; Jewelers Vigilance Committee; 24 months  
PS 69-76, Marking of Articles Made Wholly or in Part of Platinum; Jewelers Vigilance Committee; 2 months  
PS 70-76, Marking of Articles Made of Karat Gold; Jewelers Vigilance Committee; 24 months  
PS 71-76, Marking of Jewelry and Novelties of Silver; Jewelers Vigilance Committee; 24 months  
CS 98-82, Artists Oil Paints; Artists Equity Association, Inc.; 6 months  
CS 130-80, Color Materials for Art Education in Schools; the Crayon, Water Color and Craft Institute, Inc.; 6 months  
CS 151-50, Body Measurements for the Sizing of Apparel for Infants, Babies, Toddlers and Children (for the Knit Underwear Industry); Mail Order Association of America; 12 months  
R 192-83, Crayons and Related Art Materials for School Use (Types, Sizes, Packages and Colors); The Crayon, Water Color and Craft Institute, Inc.; 6 months

The following standard has been replaced by a standard being developed or published by a private standards-writing organization and, therefore, Department of Commerce sponsorship is no longer need for it:

PS 17-68, Polyethylene-sheeting (construction, industrial and agricultural applications); Society of the Plastics Industry

In the absence of any request for retention or maintenance, the following standards are withdrawn:

PS 13-68, Uncorded Slab Urethane Foam for Bedding and Furniture Cushioning  
PS 15-68, Custom Contact-Molded Reinforced Polyester Chemical-Resistant Process Equipment  
PS 23-70, Horticultural Grade Perlite

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PS 24-70, Melamine Dinnerware (Alpha-Cellulose Filled) for Household Use  
 PS 25-70, Heavy-Duty Alpha-Cellulose-Filled Melamine Tableware  
 PS 27-70, Mosaic-Parquet Harwood Slat Flooring  
 PS 29-70, Plastic Heat-Shrinkable Film  
 PS 31-70, Polystyrene Plastic Sheet  
 PS 34-70, Fluorinated Ethylene-Propylene (FEP) Plastic-Lined Steel Pipe and Fittings  
 PS 52-71, Polytetrafluorethylene (PTFE)  
 PS 53-72, Glass-Fiber Reinforced Polyester Structural Plastic Panels  
 PS 56-73, Structural Glued Laminated Timber  
 PS 57-73, Cellulosic Fiber Insulation Board  
 PS 58-73, Basic Hardboard  
 PS 59-73, Prefinished Hardboard Paneling  
 PS 60-73, Hardboard Siding  
 PS 62-74, Grading of Diamond Powder in Sub-Sieve Sizes  
 CS 138-53, Insect Wire Screening  
 CS 192-53, General Purpose Vinyl Plastic Film  
 CS 201-55, Rigid Polyvinyl Chloride Sheets  
 CS 227-58, Polyethylene Film  
 CS 245-62, Vinyl-Metal Laminates  
 CS 257-63, TFE-Fluorocarbon (Polytetrafluorethylene) Resin Molded Basic Shapes  
 CS 268-65, Hide-Trim Pattern for Domestic Cattlehides  
 CS 274-66, TFE-Fluorocarbon Resin Sintered Thin Coatings for Dry Film Lubrication  
 R2-62, Bedding Products and Components

In accordance with § 10.1(e) of the revised Procedures for the Development of Voluntary Product Standards and by agreement with the Consumer Product Safety Commission, the Department will retain sponsorship of the following Voluntary Product Standard for the period of time stated below to allow for arrangements to be made for its sponsorship by a private standards writing organization.

PS 66-75, Safety Requirements for Home Playground Equipment; 12 months

For further information contact Eric A. Vadelund, Office of Engineering Standards, National Bureau of Standards, Washington, D.C. 20234. Telephone: (301) 921-3272.

Dated: January 13, 1982.

Ernest Ambler,  
 Director.

[FR Doc. 82-1316 Filed 1-19-82; 8:45 am]  
 BILLING CODE 2610-13-M

#### National Bureau of Standards' Visiting Committee; Meeting

Pursuant to the Federal Advisory Committee Act, U.S.C. App., notice is hereby given that the National Bureau of Standards' Visiting Committee will meet on Thursday, February 25, 1982, from 9:00 a.m. to 1:50 p.m. in Lecture Room 1107, Radio Building, National Bureau of Standards, 325 Broadway, Boulder, Colorado, after which time the Visiting

Committee members will meet with a number of NBS scientists in their various offices and laboratories until 4:30 p.m.

The NBS Visiting Committee is composed of five members prominent in the fields of science and technology and appointed by the Secretary of Commerce.

The purpose of the meeting is to review the efficiency of the Bureau's scientific work and the condition of its equipment in order to assist the Committee in reporting to the Secretary of Commerce as required by law.

The public is invited to attend, and the Chairman will entertain comments or questions at an appropriate time during the meeting.

Any person wishing to attend the meeting should inform Mrs. Carolyn Goodfellow, Office of the Director, National Bureau of Standards, Washington, DC 20234, telephone (301) 921-2228.

Dated: January 15, 1982.

Ernest Ambler,  
 Director.

[FR Doc. 82-1382 Filed 1-19-82; 8:45 am]  
 BILLING CODE 2610-13-M

#### National Conference on Weights and Measures; Meeting

Notice is hereby given that the interim meetings of the National Conference on Weights and Measures will be held January 25-29, 1982, at the National Bureau of Standards, Gaithersburg, Maryland.

The National Conference on Weights and Measures is an organization of weights and measures enforcement officials of the States, counties, and cities of the United States. The interim meetings of the Conference, as well as the annual meeting to be held next July (a notice will be published in the Federal Register prior to such meeting), brings together the enforcement officials, other government officials, and representatives of business, industry, trade associations, and consumer organizations for the purpose of hearing and discussing subjects that relate to the fields of weights and measures technology and administration.

Pursuant to authority in its Organic Act (15 U.S.C. 272(f)), the National Bureau of Standards acts as a sponsor of the National Conference on Weights and Measures in order to promote uniformity among the States in the complex of laws, regulations, methods, and testing equipment that comprises regulatory control by the States of commercial weighing and measuring.

The public is invited to attend. Additional information concerning the Conference program and arrangements may be obtained from Mr. Albert D. Tholen, Executive Secretary, National Conference on Weights and Measures, National Bureau of Standards, Washington, DC 20234; telephone: (301) 921-2401.

Dated: January 15, 1982.

Ernest Ambler,  
 Director.

[FR Doc. 82-1428 Filed 1-19-82; 8:45 am]  
 BILLING CODE 2610-13-M

#### DEPARTMENT OF DEFENSE

##### Department of the Air Force

##### USAF Scientific Advisory Board; Meeting

The USAF Scientific Advisory Board Ad Hoc Committee on Command, Control and Communications Countermeasures (C<sup>2</sup>CM) Data Base will hold meetings on February 18, 1982, from 8:00 a.m. to 5:00 p.m., and February 19, 1982, from 8:00 a.m. to 12:00 noon, in the Electronic Security Command Conference Room, Building 2000, Kelly Air Force Base, Texas.

The ad hoc committee will hold classified discussions on (1) the overall systems analysis which is the keystone of the C<sup>2</sup>CM data base problem; (2) the design and sizing of the data processing resources, and (3) the interface with existing source data bases maintained by the intelligence and operational communities and with user systems for target applications.

The meetings concern matters listed in section 552b(c), Title 5, United States Code, specifically subparagraph (1) thereof, and accordingly the meetings are closed to the public.

For further information, contact the Scientific Advisory Board Secretariat at (202) 697-8404.

Winnibel F. Holmes,  
 Air Force Federal Register Liaison Officer.

[FR Doc. 82-1387 Filed 1-19-82; 8:45 am]  
 BILLING CODE 2610-01-M

#### DEPARTMENT OF ENERGY

##### Office of Assistance Secretary for International Affairs

##### International Atomic Energy Agreements; Civil Uses; Proposed Subsequent Arrangement Between U.S. and Australia

Pursuant to section 131 of the Atomic Energy Act of 1954, as amended (42

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# NBS Voluntary Product Standard

PS 27-70

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## VOLUNTARY PRODUCT STANDARDS

*Voluntary Product Standards* are standards developed under procedures established by the Department of Commerce (15 CFR Part 10, as amended, May 28, 1970). The standards may include (1) dimensional requirements for standard sizes and types of various products, (2) technical requirements, and (3) methods of testing, grading, and marking. The objective of a *Voluntary Product Standard* is to establish requirements which are in accordance with the principal demands of the industry and, at the same time, are not contrary to the public interest.

### Development of a VOLUNTARY PRODUCT STANDARD

The Office of Engineering Standards Services of the National Bureau of Standards has been assigned by the Department of Commerce the responsibility to work closely with scientific and trade associations and organizations, business firms, testing laboratories, and other appropriate groups to develop *Voluntary Product Standards*. The Bureau has the following role in the development process: It (1) provides editorial assistance in the preparation of the standard; (2) supplies such assistance and review as is required to assure the technical soundness of the standard; (3) acts as an unbiased coordinator in the development of the standard; (4) sees that the standard is representative of the views of producers, distributors, and users or consumers; (5) seeks satisfactory adjustment of valid points of disagreement; (6) determines the compliance with the criteria established in the Department's procedures cited above; and (7) publishes the standard.

Industry customarily (1) initiates and participates in the development of a standard; (2) provides technical counsel on a standard; and (3) promotes the use of, and support for, the standard. (A group interested in developing a *Voluntary Product Standard* may submit a written request to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D. C. 20234.)

A draft of a proposed standard is developed in consultation with interested trade groups. Subsequently, a Standard Review Committee is established to review the proposed standard. The committee, appropriately balanced, includes qualified representatives of producers, distributors, and users or consumers of the product being standardized. When the committee approves a proposal, copies are distributed for industry consideration and acceptance. When the acceptances show general industry agreement, and when there is no substantive objection deemed valid by the Bureau, the Bureau announces approval of the *Voluntary Product Standard* and proceeds with its publication.

### Use of a VOLUNTARY PRODUCT STANDARD

The adoption and use of a *Voluntary Product Standard* is completely voluntary. *Voluntary Product Standards* have been used most effectively in conjunction with legal documents such as sales contracts, purchase orders, and building codes. When a standard is made part of such a document, compliance with the standard is enforceable by the purchaser or the seller along with other provisions of the document.

*Voluntary Product Standards* are useful and helpful to purchasers, manufacturers, and distributors. Purchasers may order products that comply with *Voluntary Product Standards* and determine for themselves that their requirements are met. Manufacturers and distributors may refer to the standards in sales catalogs, advertising, invoices, and labels on their product. Commercial inspection and testing programs may also be employed, together with grade labels and certificates assuring compliance, to promote even greater public confidence. Such assurance of compliance promotes better understanding between purchasers and sellers.

## Mosaic-Parquet Hardwood Slat Flooring

Effective April 15, 1970. (See section 7.)

(This voluntary Standard, initiated by the American Parquet Association, has been developed under the *Procedures for the Development of Voluntary Product Standards*, published by the Department of Commerce. See Section 8, *History of Project*, for further information.)

### 1. PURPOSE

The purpose of this Product Standard is to establish nationally recognized sizes and quality requirements for commercially available mosaic-parquet hardwood slat flooring. The Standard is intended to provide producers, distributors, and users with a basis for common understanding of the characteristics of this product.

### 2. SCOPE AND CLASSIFICATION

**2.1. Scope**—This Product Standard covers requirements for grading, moisture content, dimensions, construction, and finish for mosaic-parquet hardwood slat flooring which is intended for use in residential, institutional, and commercial buildings. A method for marking and labeling to indicate compliance with the Standard is also provided. Manufacturers' recommendations on ordering and installation are included in an appendix. The Standard does not cover flooring squares or blocks which are fabricated from conventional tongue and groove type strips.

**2.2. Classification**—The mosaic-parquet hardwood flooring covered by this Product Standard is classified as follows:

**2.2.1. Wood species**—Hardwood is wood from a botanical group of trees that generally have broad leaves and are deciduous. The wood, however, is not necessarily harder than softwoods which come from evergreen trees with needlelike leaves. Parquet flooring is produced from most commonly available hardwood species, but is generally available in the following species which are listed in accordance with their relative hardness and inherent wearing capabilities: pecan, hard maple, oak (red or white), birch, ash, beech, walnut, and cherry.

**2.2.2. Grades and finishes**—The following standard grades are available in unfinished or prefinished flooring:

<i>Unfinished</i>	<i>Prefinished</i>
1. Premium	1. Choice
2. Select	2. Natural
3. Rustic	3. Cabin

**2.2.3. Sizes**—Parquet flooring is available in "units" ranging from 8 inches by 8 inches to 28 inches by 28 inches, depending somewhat on the specific pattern (see 3.7.2.). It is also available in individual "squares" of various sizes. The units are assembled from a number of basic "squares" which are in turn assembled from slats. Slats are solid pieces of wood, usually of uniform size, which are not less than 1/2 inch nor more than 1-1/4 inches wide, not less than 4

inches nor more than 7 inches long, and not less than 5/16 inch thick (see 3.7.3. for tolerances).

**2.2.4. Unit of sale**—Unit of sale shall be by square feet of surface measure. (See "Packaging," 3.10.)

**2.2.5. Patterns**—Any pattern may be considered as complying with this Standard if all other requirements of the Standard are met. The pattern may be determined by the dimensions, species, color, grain direction, and configuration of the slats. The most commonly available pattern consists of four or more squares with the grain of each adjacent square at right angles like a checkerboard. Other patterns may consist of individual squares to be arranged by the purchaser, units with slats arranged in single and double herringbone design, or units or squares bordered with slats of the same or contrasting species.

### 3. REQUIREMENTS

**3.1. General**—Products represented as complying with this Voluntary Product Standard shall meet all of the requirements specified herein, and shall always be marked as specified in 5.1. Definitions of terms shall be in accordance with Section 6.

**3.2. Wood species**—Wood for the slats shall be solid pieces and of any hardwood species (see 2.2.1.). The species and grade shall always be identified in the package marking. The mixing of red and white oak will be permitted in all grades, unless otherwise specified or indicated. The mixing of any other species in any square or unit will not be permitted except as provided in the pattern design description.

**3.3. Grade descriptions**—The grade of wood for flooring units shall be in accordance with the following grade descriptions. A tolerance not to exceed 5 percent of the shipment or order will be permitted in the grading (see 4.2). The grade descriptions apply to the face (final exposed surface) of each slat. Eighty percent or more of the slats in a shipment shall be quarter sawn and/or edge grain.

#### 3.3.1. Grading requirements for unfinished flooring units:

**a. Premium Grade**—The face of each slat of this grade shall be clear and shall be of all heartwood, except for maple, which shall include sapwood. While this grade is selected for clear stock, it is not selected for tone or color.

**b. Select Grade**—The face of each slat of this grade may contain sapwood, slight stain, and discoloration. Occasional pin-worm holes; burls; tight, smooth pencil knots; small mineral streaks; and slight imperfections, which will be eliminated in finish process at point of installation, will be permitted. This grade is not selected for tone or color.

**c. Rustic Grade**—The face of each slat of this grade may contain slight splits and checks; knots (1/2 inch and smaller); contrasting colors; worm holes; and slight imperfections which will fill and finish satisfactorily. This grade is not selected for tone or color.

#### 3.3.2. Grading requirements for prefinished flooring units:

**a. Choice Grade**—The face of each slat of this grade shall be clear except that it may contain the following defects: an occasional small, firm pin knot; bright sapwood (except in walnut); filled worm holes less than 1/16 inch in diameter which are not ringed by dis-

coloration; and two light, thin streaks less than 2 inches long or two spots less than 1/4 inch in diameter. This grade will not admit wind shake, seasoning checks, defects in workmanship, or more than moderate color variation in the finish surface. Tinted finish must produce units of uniform color.

**b. Natural Grade**—The face of each slat of this grade may contain the following defects: heavy streaks or spots and color variation of the wood; slight variations in tinted colors in the finish; an occasional unfilled pin-worm hole not over 1/16 inch in diameter; occasional filled worm holes or knots less than 1/8 inch in diameter; two small checks or shakes less than 1/4 inch long; one small crack between two slats not over 1/32 inch wide; and one very minor workmanship defect, such as a pressure mark, slight planer tear, chipped corner, or saw mark.

**c. Cabin Grade**—This is primarily intended as a trimming grade, but it must be of such quality that a sound floor is obtainable from at least 90 percent of the flooring units in the shipment or order. The face of each slat of this grade may contain the following defects: minor workmanship defects, checks, and shakes which do not affect the soundness of the floor, open worm holes and broken knots not over 1/8 inch in diameter, small sander digs, moderate planer bite and tear, an occasional slat not fastened to the backing material or mechanical attachment, and variations in tinted colors in finishes. This grade will not admit unsound defects, such as missing corners or broken edges, units extremely out of square, or extreme workmanship defects affecting serviceability.

**3.4. Moisture content**—The moisture content of the flooring shall be between 7 and 11 percent at the time of shipment from the manufacturer's plant; however, 5 percent of the flooring may be outside this range, except that no piece shall have more than 13 percent or less than 5 percent moisture content. Moisture content shall be determined in accordance with 4.3.

**3.5. Flooring unit construction**—Any one of the following basic methods for holding the slats together as a unit of flooring until they are installed may be used. In addition to these methods, the unit may contain a tongue or corresponding matching groove on each of its four edges to assure proper matching with each adjacent unit, and may contain a slight uniform bevel not exceeding 1/16 inch along its surface perimeter. However, unfinished units are generally square edged, and each slat of each such unit is free to conform to the floor surface. All constructions shall provide not less than 1/8 inch of unobstructed wearing surface thickness.

**3.5.1. Type A—Facing materials (unfinished units only)**—The surface of the units shall be covered with a light-weight, high-wet-strength paper or other material that is applied by means of a re-moistenable adhesive, or covered with a pressure sensitive material. This material shall be easily removable during installation of the flooring by the method recommended by the flooring manufacturer.

**3.5.2. Type B—Backing materials**—Materials used as the backing support fall into two general categories which are based upon the existence or nonexistence of a significant degree of contact between the flooring adhesive and some exposed wood on the underside surface of the flooring units. The following constructions may be used for either unfinished or factory-finished flooring units.

**3.5.2.1. Type B-1**—This type of construction includes all backing materials which preclude any contact between the flooring adhesive and the underside of the exposed wood surface of the units, except for the exposed wood on the underside of the unit which is beyond the confines of the perimeter of the backing material.

**3.5.2.2. Type B-2**—This type of construction includes backing materials which permit contact between the flooring adhesive and the underside of the exposed wood surface of the unit, in addition to the exposed wood which is beyond the confines of the backing material.

**3.5.3. Type C—Mechanical attachments (for individual squares only)**—Either of the following two basic construction methods shall be used. The products utilizing this construction are generally furnished with a factory-finished surface.

**3.5.3.1. Type C-1**—Splines shall be imbedded in the underside of the slats perpendicular to the length of the slats with one of them located a short distance from the end of each square of slats.

**3.5.3.2. Type C-2**—A spline shall be inserted in a groove precut in the ends of the slats which form a square. A modification of this type which consists of enlarging the spline to form a tongue in a tongued-and-grooved square may also be used.

**3.5.4. Type D—Flooring unit assemblies**—In this type of construction, four or more of the Type C flooring squares are fastened together with a pliable adhesive to form a flooring unit.

**3.5.5. Foam-backed assemblies**—This construction consists of a Type D flooring unit assembly backed by a thin layer of dense type closed-cell foam.

**3.6. Patterns**—The pattern or design of the flooring unit, including dimensions, species, color, grain direction, and configuration of the slats, or their various assortments, shall be limited only by the basic requirements given herein, and shall be at the option of the manufacturer, unless otherwise specified by the purchaser.

### **3.7. Dimensions—**

**3.7.1. Flooring “squares”**—The basic “square” shall consist of a number of uniform sized, individual slats of wood that are not less than 1/2 inch nor more than 1-1/4 inches wide, not less than 4 inches nor more than 7 inches long, and not less than 5/16 inch thick. (See 3.7.3. for tolerances.)

**3.7.2. Flooring “units”**—A mosaic-parquet flooring “unit” generally consists of four or more of the above described basic “squares,” but the overall dimensions of the units shall be not less than 8 inches by 8 inches and shall not exceed 28 inches by 28 inches in either length or width. For single and double herringbone, single squares, or other specially designed patterns, the dimensions of the unit for the particular pattern or of the square shall govern.

**3.7.3. Tolerances**—Each single slat shall be subject to a manufacturing tolerance of plus or minus 1/64 inch in length or width, and each “square” shall be subject to a tolerance of plus or minus 1/32 inch in length or width. The length of the two face diagonal measurements of each “square” shall be within 1/32 inch when width and length conform to above tolerances. All dimensions shall be determined within the moisture content range of 7 to 11 percent.

### **3.8. Finish**

**3.8.1 Unfinished flooring**—The surface to be exposed after installation shall be that produced by the cutting machines, and shall conform to the grade descriptions stipulated in 3.3.1 with respect to mechanical or natural defects.

**3.8.2. Factory finished flooring**—The surface to be exposed to view after installation shall be finish sanded smooth and shall be thoroughly clean. The coating materials, such as penetrating sealers, varnishes, urethanes, and the coating system used shall produce a hard, water-repellent surface. The application of the materials, the drying time, the sanding, and any final waxing and buffing for the finishing system shall be controlled to produce units with smooth, clean, clear, uniform surfaces without blisters, pits, wrinkles, runs, sags, or tackiness. Staining, where used, shall produce uniform, well-blended results.

**3.9. Workmanship**—The overall workmanship and manufacturing processes shall be in accordance with standard practices of the hardwood flooring industry and shall produce flooring that is free from defects except as permitted herein.

**3.10. Packaging**—Mosaic-parquet flooring of like description and grade shall be packed together in suitable cartons so as to give the flooring adequate protection against the normal hazards of transportation. The number of units or squares per carton shall be uniform for any classification produced by any specific manufacturer. (See 5.1 for carton marking.) Each carton shall also be labeled to inform the flooring contractor that installation instructions are provided in the package. Each carton of flooring shall contain printed installation instructions (see 3.11).

**3.11. Installation instructions**—The instructions shall give full and complete directions, as applicable, for the selection of the flooring location; the preparation, waterproofing, and soundproofing of the subflooring; the equalization of moisture content; the type and application of the adhesive; the laying of the flooring; and the sanding and finishing procedures. If the instructions provide for the installation of parquet flooring over sound-deadening materials, the manufacturer shall provide specific recommendations for the type and installation of the underlayment. (The use of underlay material without adequate structural properties may result in the failure of the finish flooring from loads imposed upon it.)

## **4. INSPECTION AND TEST PROCEDURES**

**4.1. Quality control practice**—The manufacturer shall keep such records in accordance with the quality control practice in effect at his plant(s) to provide evidence to document his claim that the requirements of this Standard are met. (This requirement does not preclude additional sampling and testing that may be agreed upon between the parties concerned to verify the validity of the claim.)

**4.2. Complaints and reinspection**—It is general trade practice for the shipper to pay all of the expenses of reinspection if the reinspection results in a difference of grade in favor of the purchaser of more than the 5 percent permitted in 3.3. This percentage shall be determined on the basis of individual slats contained in the surface measure square footage in question. If, on the other hand, the difference is only 5 percent or less, the purchaser generally pays all such expenses.

**4.3. Determination of moisture content**—Either of the following methods shall be used to determine the moisture content of the flooring.

**4.3.1. Moisture meter method**—An electrical moisture meter calibrated against the oven-drying method for the specific species and thickness shall be used. Any reading in dispute shall be tested by the oven-drying method, the results of which shall be final. Electrical moisture meter tests shall be made from the unfinished side of prefinished units.

**4.3.2. Oven-drying method**—Weigh the unit, or at least one-fourth of the unit, to the nearest tenth of a gram to obtain the original weight. (Specimens for this test shall not contain any facing or backing material.) Dry the specimen in an oven maintained at a temperature of 214 to 221°F (101 to 105°C) to constant weight. Compute moisture content as follows:

$$\frac{\text{Original weight} - \text{Oven-dry weight}}{\text{Oven-dry weight}} \times 100 = \text{Percent moisture content}$$

## 5. IDENTIFICATION

**5.1. Marking**—Each carton shall contain the following information: manufacturer's name, address, and control number; the symbol of this Product Standard, PS 27-70; the wood species; the product grade; the pattern designation; the unit size; the number of units in the carton; and the total square footage (surface measure) of flooring in the carton.

**5.2.** In order that purchasers may identify products conforming to all requirements of this Voluntary Product Standard, producers and distributors may include a statement of compliance in conjunction with their name and address on product labels, invoices, sales literature, and the like. The following statement is suggested when sufficient space is available:

This parquet flooring conforms to all of the requirements established in Product Standard PS 27-70, developed cooperatively with the industry and published by the National Bureau of Standards under the *Procedures for the Development of Voluntary Product Standards* of the U.S. Department of Commerce. Full responsibility for the conformance of this product to the standard is assumed by (name and address of producer or distributor).

The following abbreviated statement is suggested when available space on labels is insufficient for the full statement:

Conforms to PS 27-70, (name and address of producer or distributor).

## 6. DEFINITIONS

For the purpose of the Standard, the following definitions shall apply:

**Adhesive**—A substance capable of holding materials together by surface attachment.

**Adhesive layer**—The dried film of flooring adhesive which bonds or attaches the finish flooring to the surface of the subfloor.

**Bright sapwood**—Sapwood which has retained its natural color.

**Burl**—Wood grain which is severely distorted so as to form a rounded area.

**Check** —A separation of the wood parallel to the grain and across the rings of annual growth.

**Clear** —Wood which retains its natural color and is free of defects.

**Discoloration**—Any unnatural coloring.

**Filled hole**—A hole filled with a wood filling material and sanded to form a smooth and serviceable surface.

**Heartwood**—The dark wood extending from the pith to the sapwood of a tree.

**Heavy streaks**—Spots and streaks of sufficient size and density to severely mar the appearance of the wood.

**Mineral streaks**—Wood containing an accumulation of mineral matter causing an unnatural color ranging from greenish brown to black.

**Pencil knot**—Tight, smooth knot not exceeding 1/8 inch in average diameter.

**Pin-worm hole**—Hole not exceeding 1/16-inch diameter.

**Planer bite**—A groove cut across the face of a slat by the planer knife.

**Planer tear**—Tear caused by the planer knives cutting into the ends of the wood fibers as in interlocked-grained and cross-grained wood.

**Pressure mark**—A blemish caused by excess pressure exerted by a machine.

**Quarter sawn**—Annual growth rings which form an angle of 45° or more with the surface of a piece of wood.

**Remoistenable glue**—A glue which is highly sensitive to water and which can be reactivated with water, for example, a dextrine.

**Sapwood**—The wood of pale color around the outer surface of a tree.

**Slats**—The small, solid hardwood pieces which form the mosaic-parquet squares.

**Squares**—Usually composed of an equal number of slats.

**Stain**—A discoloration in wood caused by the growth of certain dark-colored fungi.

**Units**—Usually four or more basic mosaic-parquet squares.

**Wind shake**—A separation of the wood occurring between the rings of annual growth.

**Worm hole**—A cavity made by a woodboring worm or insect.

## 7. EFFECTIVE DATE

The effective date of this Voluntary Product Standard is the date upon which reference to the Standard may be made by producers, distributors, users and consumers, and other interested parties. Compliance by producers with all of the requirements of this Product Standard may not actually occur until some time after its effective date. Products shall not be represented as conforming to this Product Standard until such time as all requirements established in the Standard are met. The effective date of this Standard is April 15, 1970.

## 8. HISTORY OF PROJECT

On December 3, 1965, the American Parquet Association, Inc., (APA) requested the cooperation of the National Bureau of Standards in the development of a Standard for solid hardwood, single-slat, mosaic-parquet flooring.

The original draft of the Standard was based on the grading rules of the APA and the applicable requirements of Federal Specification NN-B-350, *Block, Floor, Wood, (Hardwood; Solid, Laminated, Slat)*. This draft was reviewed by the National Bureau of Standards Building Research Division and by the Forest Products Laboratory in Madison, Wisconsin. In October 1966, a revised draft was circulated as a proposed Product Standard to all known producers of parquet flooring and to a representative list of distributors, flooring contractors, Government agencies, and other users. Their comments were transmitted to the APA for consideration.

A new draft of the proposed Standard was then submitted to a Standard Review Committee made up of representatives of various segments of the industry including consumers. With their approval, the recommended Product Standard, designated TS 109d, *Mosaic-Parquet Hardwood Slat Flooring*, was circulated to all interests for acceptance. From the responses to this circulation, it was determined that the Standard was supported by a "consensus" as defined in the Product Standards procedures and that there were no substantive objections deemed valid by the National Bureau of Standards.

Accordingly, the publication of Product Standard PS 27-70, *Mosaic-Parquet Hardwood Slat Flooring*, was approved by the National Bureau of Standards to be effective April 15, 1970.

*Technical Standards Coordinator:*

William H. Furcolow, Office of Engineering Standards Services,  
National Bureau of Standards

## 9. STANDING COMMITTEE

The individuals whose names are listed below constitute the membership of the Standing Committee for this Standard. The function of the committee is to review all proposed revisions and amendments in order to keep this Standard up-to-date. Comments concerning this Standard and suggestions for its revision may be addressed to any member of the committee or to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D. C. 20234, which acts as secretary for the committee.

### *Representing Producers*

Robert F. Harkins, Sales Manager, Harris Manufacturing Company,  
Post Office Box 300, Johnson City, Tennessee 37602 (Chairman)  
Sykes Harris, President, Wilson Oak Flooring Company, Post  
Office Box 509, Warren, Arkansas 71671 (Representing the American Parquet Association)  
Charles E. Tibbals, President, Tibbals Flooring Company, Post  
Office Box A, Oneida, Tennessee 37841

### *Representing Distributors*

Thomas A. Stalker, Secretary, Robert J. Stalker, Inc., 89 Pearl  
Street, Braintree, Massachusetts 02184  
Tom Coleman, Coleman Floor Company, 3100 Tollview Road, Rolling  
Meadows, Illinois 60008  
David V. Ferrari, President, Virginia Hardwood Company, 116  
Railroad Avenue, Monrovia, California 91016

### *Representing Users*

Morley E. Foster, Vice President, Bauer-Foster Floors, Inc., 10401

Lyndon Avenue, Detroit, Michigan 48238 (Representing Wood Flooring Institute of America)  
Willard E. Bryant, Director, Technical Services, National Association of Home Builders, 1625 L Street, NW., Washington, D. C. 20036  
Campbell L. Reed, Director, Building Division, Associated General Contractors of America, 1957 E Street, NW., Washington, D. C. 20006

*Representing General Interests*

Robert Allan Class, Director of Technical Programs, American Institute of Architects, 1735 New York Avenue, NW., Washington, D. C. 20006  
G. R. Claiborn, Technical Director, Building Officials Conference of America, 1313 East 60th Street, Chicago, Illinois 60637  
John F. Haviland, Park Haviland Hotel, 731 S. W. Salmon Street, Portland, Oregon 97205 (Representing the National Apartment Association, Inc.)  
Leopold F. Skoda, Building Research Division, National Bureau of Standards, U.S. Department of Commerce, Washington, D. C. 20234  
Glenwood M. Edmonson, Civil Engineer, Architectural Division, Federal Housing Administration, Department of Housing and Urban Affairs, Washington, D. C. 20412

**10. ACCEPTORS**

The manufacturers, distributors, users, and others listed below have individually indicated in writing their acceptance of this Voluntary Product Standard prior to its publication. The acceptors have indicated their intention to use this Standard as far as practicable but reserve the right to depart from it when necessary. The list is published to show the extent of recorded public support for this Standard.

**ASSOCIATIONS**

**(General Support)**

American Parquet Association, Little Rock, Arkansas	National Building Material Distributors Association, Chicago, Illinois
American Specification Institute, Chicago, Illinois	National Lumber and Building Materials Dealers Association, Washington, D.C.
Associated General Contractors of America, Inc., Washington, D.C.	National Oak Flooring Manufacturers Association, Memphis, Tennessee
California Redwood Association, San Francisco, California	Southern Hardwood Lumber Manufacturers Association, Memphis, Tennessee
Home Manufacturers Association, Washington, D.C.	Southern Pine Inspection Bureau, Pensacola, Florida
Maple Flooring Manufacturers Association, Oshkosh, Wisconsin	Wood Flooring Institute of America, Chicago, Illinois
Michigan Lumber Building Material Salesmen, Detroit, Michigan	Woodwork Institute of California, Fresno, California
National Association of Home Builders, Washington, D.C.	

**PRODUCERS**

Cloud Oak Flooring Company, Springfield, Missouri	Peace Flooring Company, Inc., Magnolia, Arkansas
Crown Mosaic-Parquet Flooring, Inc., Sevierville, Tennessee	Tibbals Flooring Company, Oneida, Tennessee
Harris Manufacturing Company, Johnson City, Tennessee	Wilson Oak Flooring Company, Inc., Warren, Arkansas
Hayes Brothers Flooring Company, Inc., Calico Rock, Arkansas	

**DISTRIBUTORS**

Bahr Lumber Company, Cleveland, Ohio	Carter-Jones Lumber Company, Akron, Ohio
Barger Millwork Company, Statesville, North Carolina	Central Building Products Company, Fort Worth, Texas
Barker-Lubin Company, Springfield, Illinois	Daley, Carl E., Company, Beltsville, Maryland
Belmont Lumber Company, Inc., Belmont, North Carolina	

Dantzer Lumber & Export Company, Inc., Pompano Beach, Florida  
Denniston & Partridge Company, Newton, Iowa  
Derr Flooring Company, Philadelphia, Pennsylvania  
DeVille Lumber Company, The, Canton, Ohio  
Duratile Company, Inc., Columbus, Ohio  
Ehrlich-Harrison Company, Seattle, Washington  
Emerson Hardwood Company, Portland, Oregon  
Exchange Lumber & Manufacturing Company, Spokane, Washington  
Farmers Co-op Company Lumber Division, Creston, Iowa  
Floor Service Supply Company, San Jose, California  
Foley Lumber Company, Jacksonville, Florida  
Frost Hardwood Lumber Company, San Diego, California  
Gallher, W. T., & Brother, Inc., Washington, D.C.  
Germain Lumber Corporation, Pittsburgh, Pennsylvania  
H & S Lumber Company, Charlotte, North Carolina  
Hansen Wholesale Lumber Corporation, Detroit, Michigan  
Harbor Sales Company, Inc., Baltimore, Maryland  
Harris Flooring Company, Roslyn, New York  
Hirth, Harold, Inc., Chicago, Illinois  
Houston Sash & Door Company, Houston, Texas  
Kimbrough-Carpenter, Inc., Albuquerque, New Mexico  
Lengerelo Lumber Company, Temple, Texas  
Lumbermens Merchandising Corporation, Wayne, Pennsylvania  
Lumber Products, Portland, Oregon  
Meadow River Lumber Company, The, Ral-  
nelle, West Virginia  
Mechanics Lumber Company, North Little  
Rock, Arkansas  
Mid-West Floor Company, St. Louis, Mis-  
souri  
Midwest Lumber Company, Minneapolis,  
Minnesota  
Northwestern Flooring & Lumber Company,  
St. Paul, Minnesota  
Pease Company, Hamilton, Ohio  
Plunkett-Webster Lumber Company, Inc.,  
New Rochelle, New York  
Ray Lumber Company, Phoenix, Arizona  
Sawyer, W. H., Lumber Company, Wor-  
cester, Massachusetts  
Seaboard Plywood & Lumber Corporation,  
Watertown, Massachusetts  
Smith, A. J., Company, Nashville, Ten-  
nessee  
Smith-Haggard Lumber Company, Lexing-  
ton, Kentucky  
Sutton Supply, Inc., Portland, Maine  
Swan Lake Moulding Company, Klamath  
Falls, Oregon  
Temple Johnson Floor Company, Oklahoma  
City, Oklahoma  
Theiling-Elliott Lumber Company, St. Louis,  
Missouri  
Walker-Kurth Lumber Company, Houston,  
Texas  
Willard Lumber Company, Fresno, Cali-  
fornia  
Wilson Oak Flooring Company, Dallas,  
Texas  
Woodward Lumber Company, Seattle, Wash-  
ington

#### USERS

Bank Building and Equipment Corporation,  
St. Louis, Missouri  
Boise Cascade Building Company, Los  
Angeles, California  
Bornstein, Ale, Inc., Louisville, Kentucky  
Brust & Brust, Inc., Milwaukee, Wisconsin  
Camlet, J. Thomas, & Son, Architects &  
Engineers, Clifton, New Jersey  
Cannon & Mullen, Architects, Salt Lake  
City, Utah  
Cincinnati Floor Company, Inc., Cincinnati,  
Ohio  
Dollar, Bonner and Funk, Architects, Wil-  
mington, Delaware  
Durham Anderson Freed Company, Seattle,  
Washington  
Fleetwood Flooring Company, Paterson, New  
Jersey  
Forsythe, Bergemann & Vanek, Architects,  
Canton, Ohio  
G H L Corporation, Plywood Structural Di-  
vision, Auburn Heights, Michigan  
Grant, Ernest R., Woodland Hills, California  
Hoener, P. John, and Associates, St. Louis,  
Missouri  
Integrated Products, Rome, Georgia  
Jackson Linoleum Company, Jackson, Mis-  
sissippi  
Kemp, Bunch & Jackson, Architects, Jack-  
sonville, Florida  
Kitchen & Hunt, Architects, San Francisco,  
California  
Kivett and Myers, Architects & Planners,  
Kansas City, Missouri  
Kriens Construction Company, Sioux Falls,  
South Dakota  
Lee Potter Smith & Associates, Paducah,  
Kentucky  
Lehmann, E. G., Associates, AIA, Peoria,  
Illinois  
Maryland Housing Corporation, Baltimore,  
Maryland  
McCoy, Ernest L., Architect, Bakersfield,  
California  
Montgomery Construction Company, Inc.,  
Louisville, Kentucky  
Newlin-Johnson Development Company, Inc.,  
Terre Haute, Indiana  
Office of Joseph Linden Heacock, Jr., The,  
Hatboro, Pennsylvania  
Parish, Merwin & Parish, Architects, St.  
Petersburg, Florida  
Parkhurst, Appler, Marolf, Mogler, Archi-  
tects, Rock Island, Illinois  
Precision-Built Corporation, Cincinnati,  
Ohio  
Redding, R., Construction Company, Inc.,  
Spokane, Washington  
Rose, O.M. & C.H., Inc., Columbus, Ohio  
Standard Floors, Inc., Washington, D.C.  
Trier, Lester A., Elkhart, Indiana  
Wank, Adams & Slavin, Architects and  
Engineers, New York, New York  
Ward, John M., Jr., Designer, Baton Rouge,  
Louisiana  
Wilber, Kendrick, Workman & Warren,  
Architects—Engineers, Charlotte, North  
Carolina  
Wilson, Morris, Crain & Anderson, Houston,  
Texas  
Wollenweber, Kenneth H., AIA, Eugene,  
Oregon

#### GENERAL INTEREST

Ashton, Brazier, Montmorency & Associates,  
Architects, Salt Lake City, Utah  
Baton Rouge Lumber Company, Inc., Baton  
Rouge, Louisiana  
Bright Coop Company, Nacogdoches, Texas  
Butler Fixture & Manufacturing Company,  
Denver, Colorado  
Childs, E. H., Designer, Terre Haute,  
Indiana  
Clarke Veneers and Plywood, Jackson, Mis-  
sissippi  
Consultants Network, Inc., Santa Ana, Cali-  
fornia  
Cordes Lumber Company, Cincinnati, Ohio  
Frontier Wholesale Company, Lubbock,  
Texas

Gans, Carl H., New York, New York  
 Georgia Electrification Council, Athens, Georgia  
 Great Southern Wirebound Box Company, Magnolia, Mississippi  
 Hirzel, Charles K., AIA, New York, New York  
 Holdstein, Milo S., Cleveland, Ohio  
 Illinois Bell & Bell Company, Architects, Chicago, Illinois  
 Imperial Woodworking, Fall River, Massachusetts  
 Kerr-McGee Chemical Corporation, Oklahoma City, Oklahoma  
 Langdale Company, The, Valdosta, Georgia  
 Levi, Solomon, P.E., Brooklyn, New York  
 Lloyd Plywood Company, Seattle, Washington  
 Ludovici, D. F., Consulting Engineers, Miami, Florida

McPherson Company, The, Engineers-Architects, Greenville, South Carolina  
 Norfolk and Western Railway Company, Roanoke, Virginia  
 Northern Arizona University, School of Forestry, Flagstaff, Arizona  
 Pittsburgh Testing Laboratory, Pittsburgh, Pennsylvania  
 Potlach Forests, Inc., Southern Division, Wood Products Group, Warren, Arkansas  
 Southwest Forest Industries, Phoenix, Arizona  
 Virginia Polytechnic Institute, Blacksburg, Virginia  
 Wagoner, Harold E., FAIA & Associates, Philadelphia, Pennsylvania  
 Watson & Company, Tampa, Florida

#### FEDERAL GOVERNMENT

Agriculture, Department of, Forest Service, Albuquerque, New Mexico  
 Air Force, Department of, Robins Air Force Base, Georgia  
 Army, Department of, Office of the Chief of Engineers, Military Construction (ENGM-CES), Washington, D.C.  
 Defense Supply Agency, Lumber Division, Columbus, Ohio  
 General Services Administration, Washington, D.C.

Housing and Urban Development, Department of, Federal Housing Administration, Washington, D.C.  
 Interior, Department of, Bureau of Indian Affairs, Albuquerque, New Mexico  
 Interior, Department of, National Park Service, Washington, D.C.  
 Justice, Department of, Bureau of Prisons, Washington, D.C.  
 Navy, Department of, Naval Facilities Engineering Command, Washington, D.C.

#### STATE AND LOCAL GOVERNMENT \*

Bloomington, city of, License & Inspection Department, Bloomington, Minnesota  
 Chula Vista, city of, Building & Housing, Chula Vista, California  
 Durham, city of, Durham, North Carolina  
 Lynchburg, city of, Bureau of Inspections, Lynchburg, Virginia

Oregon, State of, Department of General Services, Salem, Oregon  
 San Diego, city of, San Diego, California  
 Scottsdale, city of, Scottsdale, Arizona  
 Torrance, city of, Torrance, California

### APPENDIX

#### Manufacturers' Recommendations

The following information is not part of the requirements of this Standard, but represents the custom of the trade and manufacturers' recommendations based on their long experience. It is presented here to afford the purchaser the maximum service from the proper use of mosaic-parquet hardwood flooring.

**A1. Ordering information**—Purchasers should specify the wood species, the grade, whether unfinished or prefinished flooring is required, complete details on the pattern and dimensions required for each flooring unit, and specific finishing instructions, if necessary.

**A2. Installation recommendation**—Wood flooring will give the best service if its moisture content, when laid, is close to that which it will ultimately obtain in service; consequently, mosaic-parquet hardwood flooring should not be unpacked or laid until all plaster, concrete, and masonry work is completed and entirely dry and until all exterior openings are closed.

In order to obtain the maximum service and satisfaction from this type of flooring, installation should conform to the latest written recommendations and specification data of the manufacturers of the flooring and the flooring adhesive. In all cases, the manufacturer's printed installation instructions (and/or technical notes) and local building codes relating to the product should be used in both the selection of job conditions compatible with the flooring product and in the installation of the flooring product, especially if installation is to be on grade. Installation is not generally recommended below grade. This flooring material can be used over sound-deadening material provided the material will offer sufficient support to the finished flooring without breakage, indentation, or equivalent damage. Contact manufacturer for information on such installations.