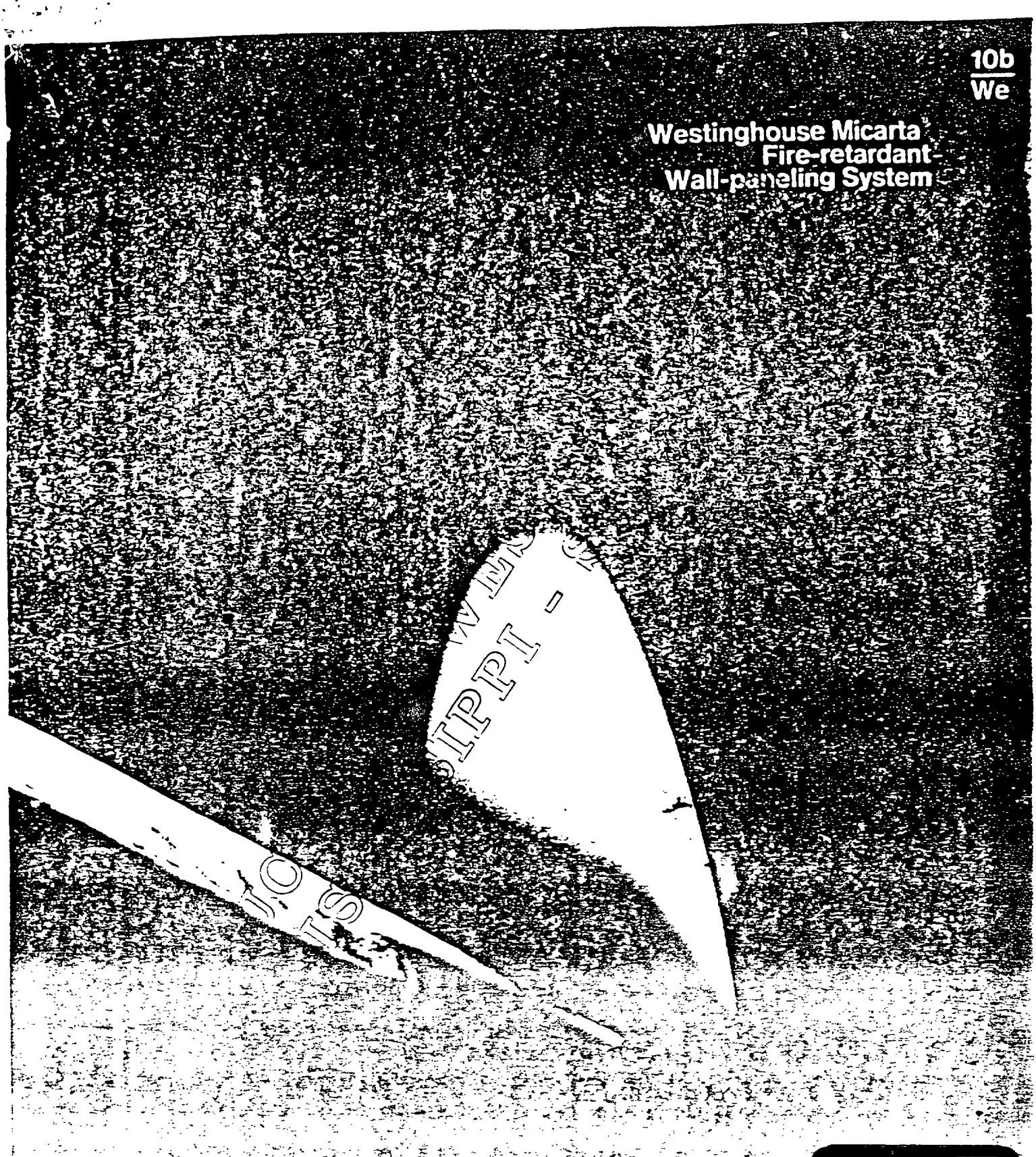
10b
We

Westinghouse Micarta Fire-retardant Wall-paneling System



PLAINTIFF'S EXHIBIT WH-750

Micarta Fire-retardant Wall-paneling System* helps keep interiors safe . . . clean

Here is a completely integrated, interior wall paneling system, using Fire retardant Micarta approved by Underwriters' Laboratories. Westinghouse Fire retardant Micarta has the lowest combined industry rating for flame spread and smoke developed (UL classification) and meets or exceeds most building codes. NEMA Standard LD 1-1964, and the United States Coast Guard standards of fire safety in passenger and cargo ships. As a matter of fact, ninety-seven percent of the new American merchant ships use Westinghouse Fire retardant Micarta as standard for interior walls.

But this wall system does more than just add safety to an installation. It supplies beauty, durability, and maintenance free care. Micarta is impervious to moisture, chemicals, and odors. It's easy to clean, and it resists chips, cracks, stains, peeling, crazing, or fading. Micarta is made to meet the high sanitary requirements of institutions, yet still stand up to the abuse of children. That's why it's the ideal interior wall paneling for schools and hospitals.

A unified system that also offers exceptional design flexibility . . . simple installation

Fire retardant Micarta wall panels are available in hundreds of colors, patterns, and wood grains, and can be supplied in any of six finishes ranging from a mirrorlike surface (with a Gloss Meter Reading of 80-100) to an oil-rubbed appearance (Gloss Meter Reading of 2-5). All Fire-retardant Micarta wall panels have Fire-retardant Micarta backing sheets to increase stability as well as fire resistance. Panels can be ordered with Marinite cores or with cores of fire-rated chipboard.

The joinery and hardware trim in the wall paneling system are extruded aluminum, and are supplied in standard lengths. Exposed hardware (battens, and ceiling and floor trim) is available anodized in a wide variety of colors—in bright or dull finish. Design flexibility of the system is further aided by the optional use of decorative snap-in inserts for the batten strips. The inserts are available in plastic or other materials, in accent or matching colors. It is not necessary to use the snap-in inserts, because the battens have strong design interest inherent in them as a result of the recess which is finished with a satin black background, flush head, socket cap screws which are used to fasten the battens to the backup strips have a matching mar resistant satin finish and are counter-sunk to blend in.

Installation is simple, quick, economical

Here's how it goes together—

After the ceiling and floor trim strips have been affixed to the walls, the vertical backup strip (straight joint, inside corner, outside corner, or end) is attached to the wall. The panel is lifted up into the ceiling strip, and dropped into the floor trim. And finally the batten strip is attached to the backup strip. That's all there is to it unless you want to add the decorative insert for the batten. Just snap it in!

Here are some of the timesaving and [illegible] features. Any panel can be removed anywhere in the system without disturbing any other panel.

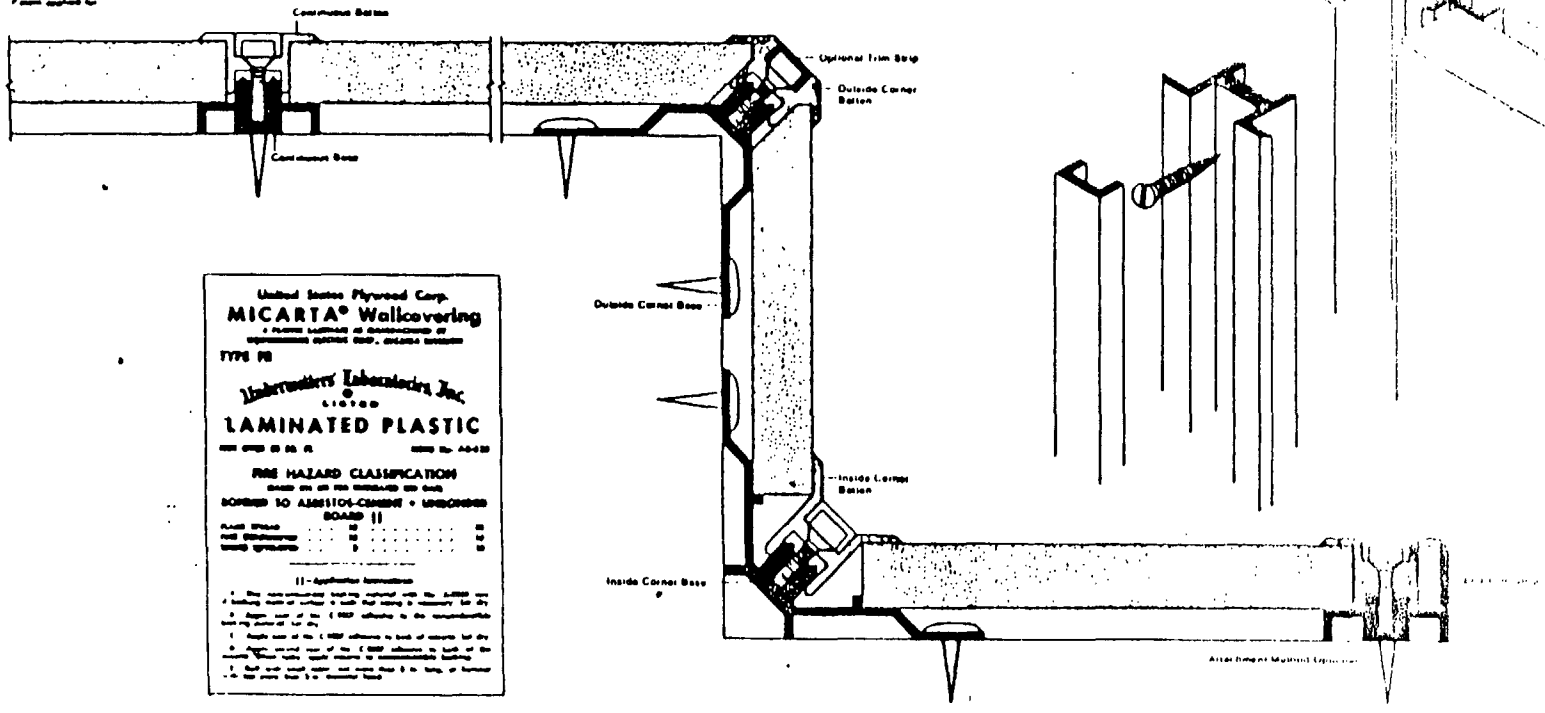
Cutting in the field is extremely simple. All hardware cuts are "straight across" (no miters or bevels).

Panel cuts are just as simple, with no bevels except at outside corners, and they are not critical (see detail).

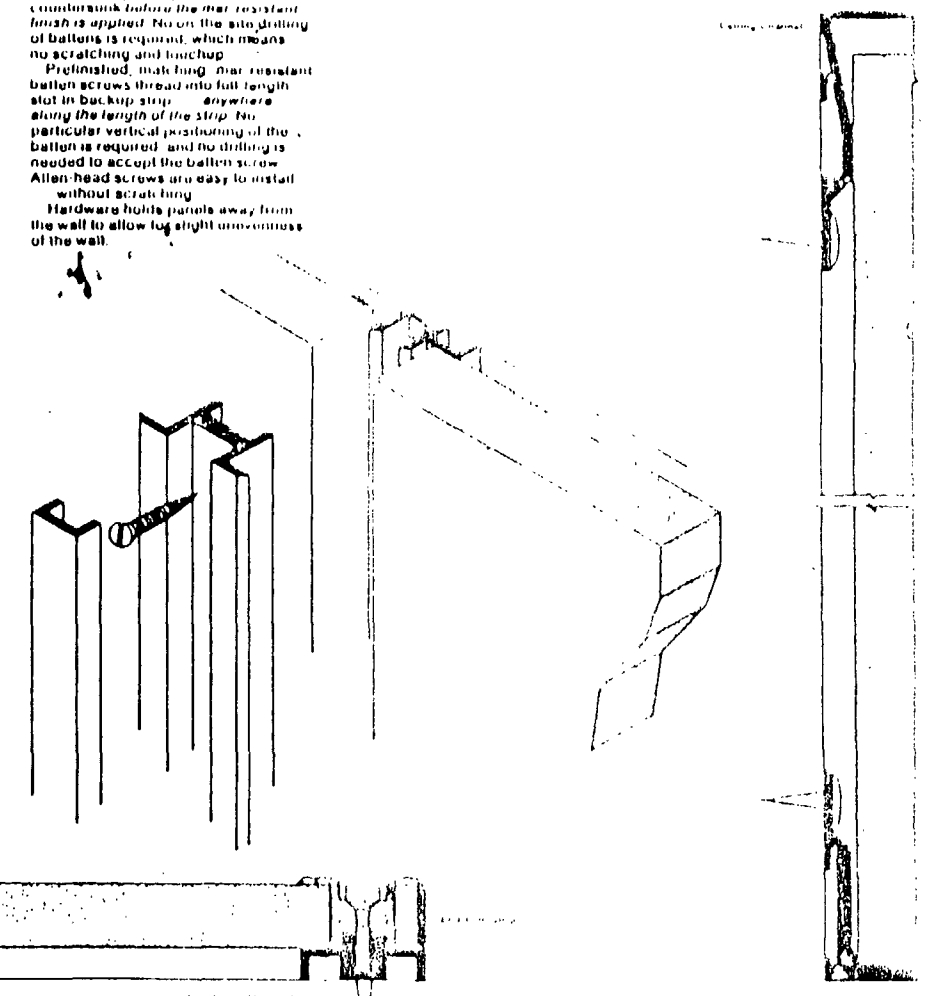
Batten strips are predrilled and countersunk *before the mar resistant finish is applied*. No on the site drilling of battens is required, which means no scratching and touchup.

Prefinished, matching mar resistant batten screws thread into full length slot in backup strip *anywhere along the length of the strip*. No particular vertical positioning of the batten is required, and no drilling is needed to accept the batten screw. Allen-head screws are easy to install without scratching.

Hardware holds panels away from the wall to allow for slight unevenness of the wall.



United States Plywood Corp.
MICARTA® Wallcovering
TYPE HI
Underwriters' Laboratories, Inc.
LISTED
LAMINATED PLASTIC
FIRE HAZARD CLASSIFICATION
BOARD II



SPEC-DATA

This Spec-Data Sheet conforms to editorial style prescribed by The Construction Specifications Institute. The manufacturer is responsible for technical accuracy.

1. PRODUCT NAME

Fire-Retardant Laminated Plastic
Westinghouse Fire-Retardant
Micarta

2. MANUFACTURER

Westinghouse Elec. Corp.
Micarta Division
304 Hoover Street
Hampton, S. C. 29924
Phone: (803) 943-2311

3. PRODUCT DESCRIPTION

Basic Use: Fire-Retardant Micarta is recommended for wall surfaces in schools, churches, hospitals, and other commercial and industrial buildings, requiring a Class I fire-retardant rating. Widely used as interior surfacing for ships, ocean liners, hospitals, off-shore drilling rigs and office buildings.

Limitations: Fire-Retardant Micarta should not be bonded to concrete or to cores with low internal-bond strength such as plaster board, gypsum board, plaster and similar materials. It should not be used in areas exposed to temperatures above 125° F for extended periods of time (2 weeks) or for exterior applications.

Composition and Materials: Fire-Retardant Micarta consists of a melamine impregnated decorative print sheet and translucent overlay sheet, with a thermosetting resin impregnated asbestos paper core consolidated under heat and pressure to form a rigid sheet.

Colors: Fire-Retardant Micarta is available with UL classifications in selected colors, patterns, wood grains, and finishes. Contact nearest sales office for detailed information.

Sizes: Standard widths are 24, 31, 36, and 48 inches. Standard lengths are 60, 72, 96, 120, and 144 inches.

Applicable Standards: Meets or exceeds National Electrical Manufacturers Association (NEMA) Standard LD 1-1971, for laminated thermosetting decorative sheets.

Approved by the United States Coast Guard for maritime applications in accord with Coast Guard regulations.

Classified by Underwriters Laboratories Inc.

U. L. Labels: All U. L. Labels are kept by the Assistant to the Quality Control Supervisor, and each order is recorded. The Labels can be applied to the crates only by the Quality Control Supervisor or his Assistant.

Resins and Treated Paper: All production batches of resin are checked by Quality Control. Inspectors check treated paper during treating every thirty minutes for resin content and resin flow.

Pattern Availability: Because of papers used on certain patterns being restricted by Underwriter's Laboratories, approved patterns are listed by Engineering Department for Quality Control and Marketing. This list is up-dated once a year.

4. TECHNICAL DATA

See Table I "Micarta Typical Test Values" for physical properties of Micarta compared to requirements of NEMA standards.

Table I—Fire-Retardant Micarta Typical Test Values

Property	NEMA STANDARDS		Micarta® Test Values	NEMA Test Method
	General Purpose	Postforming	Fire-Retardant	All Types
Wear Resistance Wear Value, cycles/minimum Rate of Wear, g/100 cy	500 0.08	400 0.08	650 0.05	1-2.03
Boiling Water Resistance	No effect	Slight dulling	No effect	1-2.02
High-Temperature Resistance	Slight dulling	Slight dulling	Slight dulling	1-2.03
Cigarette Burn Resistance, Seconds	110 minimum	75 minimum	94	1-2.04
Stain Resistance Reagents 1-20 Reagents 21-29	No effect Superficial stains	No effect Superficial stains	No effect Slight None	1-2.05
Color Fastness	Slight change	Slight change	No change	1-2.06
Moisture Resistance Weight Increase, % Thickness Increase, %	2.10 2.10	12 max 12 max	3.8 3.8	1-2.07
Dimensional Stability With Grain, % Cross Grain, %	0.5 max 0.9 max	1.1 max 1.4 max.	0.3 0.6	1-2.08
Flexural Strength Psi, face in tension Modulus, face in tension Psi, face in compression Modulus, face in compression	12,000 800,000 18,000 300,000	12,000 15,000	21,100 1,700,000 16,100 1,600,000	1-2.09
Formability, inches	....	¾ radius		1-2.11

Additional property information for special applications available from Westinghouse.

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FOR MISSISSIPPI - SCORDINO

07000495

Table II—Fire Hazard Classications

Laminate	Substrate	Flame Spread	Fuel Contributed	Smoke Developed
Fire Retardant Micarta	Fire Retardant Novoply	15	0	40
	Mineral Board	15	15	5
General Purpose	Fire Retardant Novoply	30	0	15
	Mineral Board	55-70	35	35-55
PFR-1	Fire Retardant Novoply	15	0	90
	Mineral Board	15	5	10
Vertical Surfacing	Fire Retardant Face	25	5	40
	Fire Retardant Novoply Back	35	5	0

Labeled and classified by Underwriters Laboratories, Inc. in accordance with ASTM E 84-61 Tunnel Test method.

See Table II for fire hazard classifications covering Fire-Retardant and other types of Micarta.

5. INSTALLATION

Suitable Subsurfaces: Fire-Retardant Micarta can be field applied to any flat, structurally sound surface that is suitable for application of laminated plastics in general. Suitable substrates include standard and fire-retardant Novoply, and mineral board. (See 3. Product Description, "Limitations".)

Preparatory Work: Substrates must be rigid, smooth, even, and free from contaminants such as dirt, oil, plaster, and paint. Nails must be set below surface or substrate. Fill all holes, cracks, splits, and joints. Sand flush with surface of substrate. Standard edge fillers such as chip core filler, spackling compounds, etc., can be used.

Methods: Fabrication of Micarta can be done generally with conventional woodworking or metalworking equipment either hand operated or power driven. Sawing, drilling, edge filing, sanding, and routing should be done with the decorative side up to prevent cracking or chipping of the Micarta surface. Curved edges should be cut slightly oversize and finished by sanding, filing, or routing for smooth edges. Carbide tipped cutting edges should be used on saws, drills, and routers to produce chip-free edges and to avoid frequent reshapening of tools. Micarta should be drilled with a wood backing to prevent "breakout" at the bottom of the drilled hole.

Precautions: Provide suitable protection for edges and corners of Micarta sheets during handling and erecting, to avoid chipping. At completion, use only mild soap and water to clean surfaces; do not use abrasive cleaners, strong acids or alkalis.

Building Code Approvals: Meets interior finish requirements for the model building codes, NFPA Life Safety Code, Aircraft interior code, FAA Spec. 25.853

6. AVAILABILITY AND COSTS

Availability: Due to its unique construction and the many variables in colors, patterns, and surface finishes, Fire-Retardant Micarta is not a stock item. Specific delivery time can be obtained by contacting nearest sales office.

Costs: Variable according to quantity and locale. Contact nearest sales office for specific price according to quantity required and sheet size.

7. GUARANTEE

Westinghouse in connection with material sold agrees to correct any defect or defects in workmanship or material which may develop under proper or normal use during the period of one year from the date of shipment, by repair or by replacement F.O.B. factory of the defective part or parts, and such correction shall constitute a fulfillment of all Westinghouse liabilities in respect to the quality of said material.

Notwithstanding the foregoing, purchaser shall be responsible for carefully inspecting the product before using it so as to determine whether it is the specific product which was ordered. Westinghouse shall in no event be liable for any loss, damage or expense incurred as a result of purchaser's failure to do so. Neither shall Westinghouse be liable for any loss, damage or expense resulting from color variations between sheets. Purchaser may select sheets and match colors from Westinghouse stock if so desired.

The foregoing warranty is exclusive and in lieu of all other warranties of quality whether written, oral, or implied (including any warranty or merchantability of fitness for purpose).

Limitation of Liability: Neither party shall be liable for special indirect, incidental, or consequential damages.

The remedies of the purchaser, as set forth herein, are exclusive, and the liability of Westinghouse with respect to any contract or sale or anything done in connection therewith, whether in contract, in tort, under any warranty, or otherwise, shall not, except as expressly provided herein, exceed the price of the equipment or part on which such liability is based.

Micarta division warrants Fire-Retardant Micarta to be free of defects in material and workmanship, governed by NEMA Standards.

8. MAINTENANCE

Micarta requires only an occasional cleaning with mild soap and water. (Abrasives, acids and alkalis should not be used.)

9. TECHNICAL SERVICES

For specific technical assistance please contact nearest Micarta sales office or Westinghouse Electric Corp.

Decorative Micarta Divis.
Hampton, S. C.
(803) 943-2311

10. FILING SYSTEMS

SPEC-DATA® II

Westinghouse Micarta Fire-retardant Wall-paneling System product information

Applications:
Fire-retardant Micarta carries the Underwriters' Laboratories, Inc., label and meets rigid standards wherever fire resistance is a factor—schools, hospitals, public buildings, buses, railroad cars, and ships.

Specifications:
Panel sizes—available in standard wall-paneling lengths and widths up to 60 x 144 in.

Micarta thickness—.050 in; thickness tolerance: ± .003 in.

Cores—Marinite or fire-rated chipboard.

Finish—Any standard finish including Lo-Glare.

Colors and patterns—
Hundreds of standard colors, patterns, and wood grains; contact Micarta representative for sample chips.

Hardware—
All aluminum-extrusion trim sections are supplied in standard lengths. Vertical battens can be ordered in a variety of matching or accent colors, and may be installed with or without a snap-in insert.

Technical data:
The Underwriters' Laboratory, Inc., has established fire-hazard rating of this product as follows:

1. Fire-retardant Micarta bonded to a representative incombustible core (¼ in. Marinite-36 or cement asbestos board): flame spread 15, fuel contributed 10, smoke developed 5.
2. Fire-retardant Micarta bonded to a fire-retardant Novoply* core: flame spread 15; fuel contributed 0; smoke developed 40.
3. Standard Micarta bonded to a fire-retardant Novoply* core: flame spread 30; fuel contributed 0; smoke developed 15.

*Registered trademark of U. S. Plywood

Sales and service
Westinghouse Micarta maintains 20 sales offices to give you prompt service on any information you want about Micarta Fire-retardant Wall-paneling Systems. Write or call the sales office nearest you.

Westinghouse Micarta Sales Offices

Los Angeles, Calif. 90017
600 St. Paul Avenue
213 482-9660

San Francisco, Calif. 94111
No. 1 Maritime Plaza
415 392-5353

Jacksonville, Fla. 32207
1115 Prudential Building
904 356-5811

Miami, Fla. 33142
3550 N.W. 33rd Street
305 634-5461

Atlanta, Ga. 30318
1299 Northside Drive, N.W.
404 351-5200

Chicago, Ill. 60606
[illegible]
312 [illegible]

Louisville, Ky. 40218
1941 Bishop Lane
502 [illegible]

Boston, Mass. 02199
800 Boylston Street
[illegible]

[illegible]
[illegible]
[illegible]

Charlotte, N.C. 28201
2001 W. Morehead Street
704 377-3471

New York, N.Y. 10017
200 Park Avenue
212 692-7800

Columbus, Ohio 43212
940 Williams Avenue
614 294-5261

Philadelphia, Pa. 19004
One Decker Square
Bala Cynwyd, Pa.
215 878-1300

Pittsburgh, Pa. 15230
Chatham Center Office Bldg.
412 255-4521

Knoxville, Tenn. 37917
808 Campbell Avenue
615 522-8101

Memphis, Tenn. 38103
1520 First National Bank Bldg.
901 [illegible]

Dallas, Texas 75247
[illegible]
214 [illegible]

Roanoke, Va. 24010
[illegible]
[illegible]

[illegible]
[illegible]
414 [illegible]

Hampton, S.C. 29924
Westinghouse Electric Corporation
Micarta Division
803 943-2311

PRODUCED BY WESTINGHOUSE IN MISSISSIPPI - SCORPIO

Printed in U.S.A.

Specification Data Sheet

FIRE-RETARDANT MICARTA®

1. PRODUCT NAME

Fire-Retardant Laminated Plastic
Westinghouse Fire-Retardant Micarta®

2. MANUFACTURER

Westinghouse Elec. Corp.
Micarta Division
304 Hoover Street
Hampton, S. C. 29924
Phone (803) 943-2311

3. PRODUCT DESCRIPTION

Basic Use: Fire-Retardant Micarta is recommended for wall surfaces in schools, churches, hospitals, and other commercial and industrial buildings requiring a Class I fire-retardant rating. Widely used as interior surfacing for ships and ocean liners.

Limitations: Fire-Retardant Micarta should not be bonded to concrete or to cores with low internal-bond strength such as plaster board, gypsum board, plaster and similar materials. It should not be used in areas exposed to temperatures above 125°F for extended periods of time (2 weeks) or for exterior applications.

Composition and Materials: Fire-Retardant Micarta consists of a melamine impregnated decorative print sheet and translucent overlay sheet, with a thermosetting resin impregnated asbestos paper core, consolidated under heat and pressure to form a rigid sheet.

Colors: Fire-Retardant Micarta is available with UL label in selected colors, patterns, wood grains, and finishes. Contact nearest sales office listed on back of sheet for detailed information.

Sizes: Standard widths are 24, 30, 36 and 48 inches. Standard lengths are 60, 72, 96, 120, and 144 inches.

Applicable Standards: Meets or exceeds National Electrical Manufacturers Association (NEMA) Standard LD 1-1971, for laminated thermosetting decorative sheets and Military Specification MIL-T-17171b (ships).

Approved by the United States Coast Guard for maritime applications in accord with Coast Guard regulations.

Labeled and listed by Underwriters Laboratories Inc.

4. TECHNICAL DATA

See Table 1 "Micarta Typical Test Values" for physical properties of Micarta compared to requirements of NEMA standards.

See Table 2 for fire hazard classifications covering Fire-Retardant and other types of Micarta.

5. INSTALLATION

Suitable Subsurfaces: Fire-Retardant Micarta can be field applied to any flat, structurally

Table 1—Fire-Retardant Micarta Typical Test Values

Property	NEMA STANDARDS		Micarta® Test Values	NEMA Test Method
	1/16" General Purpose	.050" Postforming	.050" Fire-Retardant	All Types
Thickness	.062" ± .005"	.051" ± .004"	.050" ± .004	....
Wear Resistance Wear Value, cycles minimum Rate of Wear, g./100 cy	400 .08	400 .08	650 .05	1-2.01
Boiling Water Resistance	No affect	Slight dulling	No effect	1-2.02
High Temperature Resistance	Slight dulling	Slight dulling	Slight dulling	1-2.03
Cigarette Burn Resistance, Seconds	110 minimum	75 minimum	94	1-2.04
Stain Resistance Reagents 1-20 Reagents 21-29	No effect Superficial stains	No effect Superficial stains	No effect Slight-None	1-2.05
Color Fastness	Slight change	Slight change	No change	1-2.06
Moisture Resistance Weight Increase Thickness Increase	2-10% 2-10%	12% max. 12% max.	3.8% 3.8%	1-2.07
Dimensional Stability With Grain Cross Grain	.5% max. .9% max.	1.1% max. 1.4% max.	0.3% 0.6%	1-2.08
Flexural Strength Psi., face in tension Modulus, face in tension Psi., face in compression Modulus, face in compression	12,000 800,000 18,000 300,000	12,000 15,000	21,100 1,700,000 16,100 1,600,000	1-2.09
Formability	....	¾" radius	....	1-2.11

Additional property information for special applications available from Westinghouse

Table 2—Fire Hazard Classifications

	Flame Spread	Fuel Contributed	Smoke Developed	Substrate
†Fire Retardant Micarta®, .050	15 15	0 15	40 5	Fire Retardant Novoply® Mineral board
†Standard Micarta®, 1/16"	30 55-70	0 35	15 35-55	Fire Retardant Novoply® Mineral board
†P.F.R.-1	15	5	10	Mineral board
†1/32 Vertical Surfacing	25 35	5 5	40 0	Face—Fire Retardant Back—Novoply

Labeled and listed by Underwriters Laboratories, Inc. in accordance with ASTM E-84-61 Tunnel Test method

PRODUCED BY WESTINGHOUSE IN MISSISSIPPI - SCORDINO

sound surface that is suitable for application of laminated plastics in general. Suitable substrates include standard and fire-retardant Novoply, and mineral board. (See 3. Product Description, "Limitations".)

Preparatory Work: Substrates must be rigid, smooth, even, and free from contaminants such as dirt, oil, plaster, and paint. Nails must be set below surface or substrate. Fill all holes, cracks, splits, and joints. Sand flush with surface of substrate. Standard edge fillers such as chip core filler, spackling compounds, etc., can be used.

Methods: Fabrication of Micarta can be done generally with conventional woodworking or metalworking equipment, either hand operated or power driven. Sawing, drilling, edge filling, sanding, and routing should be done with the decorative side up to prevent cracking or chipping of the Micarta surface. Curved edges should be cut slightly oversize and finished by sanding, filing, or routing for smooth edges. Carbide-tipped cutting edges should be used on saws, drills, and routers to produce chip-free edges and to avoid frequent resharpening of tools. Micarta should be drilled with a wood backing to prevent "breakout" at the bottom of the drilled hole.

Precautions: Provide suitable protection for edges and corners of Micarta sheets during handling and erecting, to avoid chipping. At completion, use only mild soap and water to clean surfaces; do not use abrasive cleaners, strong acids or alkalis.

Building Code Approvals: Meets interior finish requirements for the Model Building Codes, NFPA Life Safety Code, Public Health Service Regulations Part 53, FHA Minimum Property Standards for multifamily dwellings and most city and state codes. Aircraft interior code, FAA Spec. 25.853

6. AVAILABILITY AND COST

Availability: Due to its unique construction and the many variables in colors, patterns, and surface finishes, Fire-Retardant Micarta is not a stock item. Specific delivery time can be obtained by contacting nearest sales office listed below.

Cost: Variable according to quantity and locale. Contact nearest sales office for specific price according to quantity required and sheet size.

7. GUARANTEES

Micarta division warrants Fire-Retardant Micarta to be free of defects in material and workmanship, governed by NEMA Standards.

8. MAINTENANCE

Micarta requires only an occasional cleaning with mild soap and water. (Abrasives, acids and alkalis should not be used.)

9. TECHNICAL SERVICES

For specific technical assistance, please contact nearest Micarta sales office or Westinghouse Electric Corp.

Decorative Micarta Division
Hampton, S. C.
(803) 943-2311

10. QUALITY CONTROL PROCEDURES FOR U. L. LABELED PRODUCTS

1. **Resins and Treated Paper**
   All production batches of resin are checked by Quality Control. Inspectors check treated paper during treating every thirty minutes for resin content and resin flow.

2. **Pattern Availability**
   Because of papers used on certain patterns being restricted by Underwriter's Laboratories, approved patterns are listed by Engineering Department for Quality Control and Marketing. This list is up-dated once a year.

3. **U. L. Labels**
   All U. L. Labels are kept by the Assistant to the Quality Control Supervisor, and each order is recorded. The Labels can be applied to the crates only by the Quality Control Supervisor or his Assistant.

WESTINGHOUSE MICARTA® SALES OFFICES

Orange, Calif. 92667
1435 W. Collins Avenue
714 997-0881

San Francisco, Calif. 94111
No. 1 Maritime Plaza
415 392-6353

Jacksonville, Fla. 32207
4151 Woodcock Drive
904 356-5811

Miami, Fla. 33152
3400 N.W. 31st Street
305 634-5461

Atlanta, Ga. 30318
1299 Northside Drive, N.W.
404 351-5200

Chicago, Ill. 60606
10 S. Riverside Plaza
312 461-7314

Louisville, Ky. 40218
1941 Bishop Lane
502 459-5440

Southfield, Mich. 48076
24700 Eleven Mile Road
313 352-9000

St. Louis, Mo. 63101
411 N. 7th Street
314 421-6911

Charlotte, N. C. 28201
2001 W. Morehead Street
704 377-3471

Greensboro, N. C. 27405
1020 E. Wendover Drive
919 273-3722

Edison, N. J. 28817
Box 337
Route 27 and Vineyard Road
201 287-2000

New York, N. Y. 10017
200 East 42nd Street
212 692-5112

Columbus, O. 43212
940 Williams Avenue
614 272-4816

Portland, Ore. 97209
815 N.W. 12th Avenue
503 224-4200

Philadelphia, Pa. 19004
One Decker Square
Bala Cynwyd, Pa.
215 667-7600

Pittsburgh, Pa. 15219
Chatham Center Office Bldg.
412 255-3800

Memphis, Tenn. 38103
1520 First National Bank Bldg.
901 526-8546

Dallas, Tex. 75247
8400 John Carpenter Freeway
214 631-2811

Roanoke, Va. 24010
417 W. Campbell Avenue
703 342-8925

Milwaukee, Wis. 53233
701 West Wisconsin Ave.
414 264-6400

Hampton, S. C. 29924
Westinghouse Electric Corporation
Micarta Division
803 943-2311

In Canada
Etobicoke, Ont.
(Toronto)
Micarta Laminates, Ltd.
1 Westside Drive
416 621-8920

S.D.S.-001 (3/72)

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