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IND. PRODUCTS

FORMICA®

laminated plastic

FIRE RETARDANT GRADE DECORATIVE LAMINATE

PLAINTIFF'S EXHIBIT
WH-986

APPLICATION AND INSTALLATION INSTRUCTIONS

A. GENERAL

Formica Fire Retardant Grade decorative laminate both unsupported, and veneered to asbestos cement board using Kopper's Penacolite G-1124A adhesive or Formica Super Fast Dry adhesive complies with the flame spread rating requirements of the National Building Code (1960) covering interior finish materials.

The National Building Code is an advisory document. While it is generally used by Provincial and Municipal authorities in the formulation of building codes in regions under their jurisdiction, many of the provisions may have been altered to suit particular regional requirements and standards.

It is recommended that regional authorities or building codes be consulted in areas where Formica Fire Retardant laminates are to be used to determine if Formica ULC listed ratings, and suggested installation instructions meet with local or regional fire safety design standards.

B. APPLICATION INSTRUCTIONS

1. Materials – The basic Formica Fire Retardant decorative grade construction panel is composed of 1/16" Formica Fire Retardant grade and asbestos cement board reference (ULC file CR301A–Guide No. 40 U8.16) the appropriate surface quality, density, and thickness.

   Before glueing materials together Formica Fire Retardant decorative grade should be conditioned for a minimum of 48 hrs. at temperatures not less than 70°F, with a relative humidity existing under shop conditions but not greater than 75%.

   The materials must be bonded together using Kooper's Penacolite G-1124A adhesive or Formica Super Fast Dry adhesive. Panels should be shop bonded following adhesive manufacturer's instructions. When Formica Super Fast Dry adhesive is used bonding should be done with nip rolls. On-site application of Formica Fire Retardant decorative grade using contact adhesive is not recommended.

   Other non-combustible materials, steel or asbestos gypsum board can be used with Formica Fire Retardant Grade. Before using these materials consult local or regional fire inspectors.

2. Fabrication – The unsupported laminate and basic construction panel may be fabricated by the same methods and equipment used to fabricate standard decorative Formica. All cutting tools must be kept sharp and in good condition to prevent laminate chipping or asbestos board tear out.

   Intersecting cuts and cut-outs must be cut cleanly with sharp equipment and have radiused corners. All radiused corners should have as large a radius as possible within design limitations but no smaller than 3/8". Edges of all cut-outs must be filed smoothly and be free from chipping and incipient crazing. Cut-outs to accomodate light switch boxes, plug boxes and other fixtures must have sufficient clearance to avoid binding when fixtures are inserted.

3. Application – Formica Fire Retardant Construction panel (as described in B–1) can be used over continuous solid sheathing, directly to woods studs, or furring strips on certain applications. Fixing to metal studs is also suitable subject to choice of asbestos board thickness and method of fastening. The panel may be used over plaster by applying furring strips horizontally or vertically and nailing through the plaster into firm grounds. The panel can also be used on masonary walls by fixing furring strips by the usual methods of plugging and ramsetting.

C. INSTALLATION

Methods used for fastening the basic Formica Fire Retardant panel to prepared walls depend on the size of panel, thickness and design of panel to be applied. Normally the installation method will be governed by the methods used to install asbestos cement board.

Fastening is generally by means of nails or screws at intervals of 12". Nails should penetrate 1" into solid wood and should not be driven closer than 3/8" from edge of material. "H" type moulding applied to furring strips, studs, or solid wood backing offers attractive panelling systems and eliminates edge nailing. Mouldings can be raised or applied flush with the panel surface by taking a rabbet cut along the panel edge cutting out the Formica to the proper width and using "H" moulding of appropriate width and face thickness.

If moulding are not to be used the panel can be fastened to the wall by first making a rabbet cut 1/2" wide by the depth of the Formica, and then nailing or screwing along the edge and a 1" wide contrasting or similar pattern strip of Formica applied over the joint using Formica Super Fast Dry adhesive.

The following illustrations can be used as a guide for applying Formica Fire Retardant basic wall section panels:

Maximum Recommended Span between Fastening Devices	
Panel thickness in inches	Wall Span in inches
3/16	24
1/4	30
3/8	48
1/2	48

Where panels are to be used with mouldings or in floating construction an 0.020" Formica balancing sheet should be applied to minimize any tendency of the panel to warp.

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FIRE RETARDANT GRADE DECORATIVE LAMINATE

A. GENERAL—Formica Fire Retardant Grade is a thermosetting high pressure laminate very similar in appearance and characteristics to standard 1/16" Formica decorative laminate with the additional feature of fire retardant properties. This grade is designed primarily for those vertical surface application areas where standard 1/16" Formica does not comply with certain building code requirements, specifically flame spread rating.

B. MATERIAL PROPERTIES

1. Formica Fire Retardant Grade decorative laminate is available in 1/16" thickness only.
2. Formica Fire Retardant Grade decorative laminate complies with all performance requirements of NEMA LP2-3.03 for general purpose type decorative laminates.

   Specific requirements covered are:

   (a) Wear Resistance
   (b) Resistance of Surface to Boiling Water
   (c) Resistance of Surface to High Temperature
   (d) Resistance of Surface to Cigarette Burns
   (e) Resistance of Surface to Stains
   (f) Color Fastness
   (g) Immersion in Boiling Water
   (h) Dimensional Change
   (i) Flexural Strength, Modulus of Elasticity and Deflection of Rupture.
   (j) Appearance

3. Fire retardant properties

   When tested in accordance with Underwriters' Laboratories of Canada ULC SUB. C723, "Test Method for Fire Hazard Classification of Building Materials", (Tunnel Test) Formica Fire Retardant Grade decorative laminate has the following official U/L ratings:

   (a) Formica Fire Retardant Grade decorative laminate—unsupported

   Flame Spread — 70
   Fuel Contributed — 25
   Smoke Density — over 200

   (b) Formica Fire Retardant Grade decorative laminate veneered to asbestos cement board with Formica Super Fast Dry Contact Cement.

   Flame Spread — 20
   Fuel Contributed — 15
   Smoke Density — 40

   (c) Formica Fire Retardant Grade decorative laminate veneered to asbestos cement board with Penacolite G-1124 adhesive (a phenol-resorcinol adhesive manufactured by Koppers Company, Pittsburgh, Pa.)

   Flame Spread — 15
   Fuel Contributed — 15
   Smoke Density — 60-90

C. FABRICATION—Formica Fire Retardant Grade decorative laminate may be fabricated by the same methods and equipment used to fabricate standard decorative Formica.