

# Formica Brand Laminate - Post Forming Laminate - Technical Data

## RECOMMENDED APPLICATION

Grade 12/HGP: Formica® brand General Purpose postforming laminate Grade 12/HGP is intended for application to interior horizontal or vertical surfaces requiring 1/2" (12.7mm) or greater outside radiused edges, and/or 3/16" (4.8mm) cove radii, where design, appearance, quality, durability, resistance to stain, and resistance to heat from ordinary sources are required.

Grade 20/VGP: Formica brand postforming laminate Grade 20/VGP is intended for application to interior vertical surfaces requiring 3/8" (9.5mm) or greater outside radiused edges, where design, appearance, quality, durability, resistance to stain, and resistance to heat from ordinary sources are required.

## PRODUCT DESCRIPTION

Melamine-impregnated decorative surface papers are combined with phenolic-treated kraft paper and consolidated in a press at high pressures. The sheet back is sanded to maintain a uniform thickness and facilitate bonding.

## FABRICATION AND ASSEMBLY - LIMITATIONS

Formica brand laminate is designed for interior use only. Do not adhere directly to plaster, drywall (gypsum board), fiberglass or concrete. Do not use in areas exposed to temperatures exceeding 275°F (135°C) or for exterior applications. Finished panel width should not exceed 24" (61.0cm) maximum for Grade 20/VGP.

## Machining Low Sheen laminates

Formica brand laminates with low sheen surfaces are subject to marring. Recommend fabricating with peel coat on surface (if applicable). Router base should be clean and free of burrs and debris. Table saws should be clean, flat and free of burrs.

## STORAGE

Laminate should be stored horizontally, with a caul board or other protective sheet placed on top to protect the material from possible damage. The material should be protected from moisture, and should never be stored in contact with the floor or an outside wall. Optimum conditions for storage are approximately 75°F (24°C), and 45% to 55% relative humidity.

## PRECONDITIONING

Prior to fabrication, allow both the laminate and substrate to acclimate for at least 48 hours at the same ambient conditions. Optimum conditions are approximately 75°F (24°C), and relative humidity of 45% to 55%. Provisions should be made for the circulation of air around the materials.

## SUBSTRATES

Formica brand laminate should be bonded to an appropriate substrate such as 45# density particleboard (CS 236-66: Type 1, Grade B, Class 2), or Medium Density Fiberboard (MDF). The use of plywood is discouraged whenever possible, due to the potential for stress cracking, shrink-back, and surface telegraphing problems. The substrate should be sanded smooth, clean, free of oil or grease, and uniform in thickness.

## ADHESIVES

Contact, semi-rigid (PVAc), or rigid (urea, resorcinol) adhesives may be used. Follow the adhesive manufacturer's recommendations. Certain combinations of finish, substrate, and adhesive can cause telegraphing.

## ASSEMBLY

Material, equipment, and workmanship should conform to the industry standard practices, conditions, procedures, and recommendations as specified by ANSI/NEMA LD3-2005, Architectural Woodwork Quality Standards, KCMA (Kitchen Manufacturers Association) and ANSI 161.2-1995 standards.

Postforming laminate can be sawed, drilled, routed, and fabricated using standard carbide-tipped cutting tools.

Panel assemblies should be laminated with the appropriate backing sheet to minimize warpage. Optimum balancing is obtained by bonding the same surface laminate on both sides of the assembly with the same adhesive. For less critical applications the selection of an appropriate backer, such as Formica® Grade 91/BLS, depends on the specific application. Always align sanding marks in the same direction. Installed panel width should not exceed 24" (61.0cm) maximum for Grade 20/VGP.

All inside corners of cutouts must be radiused as large as possible, 1/8" (3.18mm) minimum, to avoid stress cracking. The edges and corners should be routed, sanded, or filed smooth and free of chips or nicks.

## TECHNICAL DATA

Performance compliance of Formica brand postforming grade laminates:

ANSI/NEMA Standards Publication - LD3-2005

Formica® brand Postforming Laminate

Physical Properties	LD3 Test	12/HGP	20/VGP
Appearance	3.1	No ABC Defects	No ABC Defects
Light Resistance	3.3	Slight	Slight
Cleanability	3.4	20 (max.)	20 (max.)
Stain Resistance			
Reagents 1-10		No Effect	No Effect
Reagents 11-15		Moderate	Moderate
Boiling Water Resistance	3.5	Slight	Slight
High Temperature Resistance	3.6	Slight	Slight
Ball Impact Resistance - in	3.8	30 (min.)	20 (min.)
- mm		762 (min.)	508 (min.)
Radiant Heat Resistance - sec	3.10	100 (min.)	80 (min.)
Dimensional Change	3.11		
Machine Direction-%		1.1(max.)	1.1(max.)
Cross Direction - %		1.4 (max.)	1.4 (max.)
Wear Resistance - cycles	3.13	400 (min.)	400 (min.)
Formability - in	3.14	5/8	1/2
- mm			
Blister Resistance - sec	3.15	16	13
		55	40

## FIRE TEST DATA - ASTM E-84

Test reports are available upon request.

## **CODES AND SPECIFICATIONS**

Formica® brand Horizontal General Purpose Postforming, Grade 12 HGP

U.S. Federal Specification, LP-508-H, Style D, Type II, Class 1  
CFR Part 3280 Manufacturing Home Construction and Safety Standards  
FMVSS 302  
NSF Standard 35  
City of New York, Board of Standards and Appeals, MEA No. 327-86M

Formica® brand Vertical Postforming, Grade 20/VGP

U.S. Federal Specification, LP-508-H, Style D, Type II, Class 2  
CFR Part 3280 Manufacturing Home Construction and Safety Standards  
FMVSS 302  
NSF Standard 35

## **SIZES**

Grade 12/HGP

Sheet widths: 36" (91.4cm), 48" (121.9cm), 60" (152.4cm)  
Sheet lengths: 96" (243.8cm), 120" (304.8cm), 144" (365.8cm)

Grade 20/VGP

Sheet widths: 36" (91.4cm), 48" (121.9cm), 60" (152.4cm)  
Sheet lengths: 96" (243.8cm), 120" (304.8cm), 144" (365.8cm)

## **NOMINAL THICKNESS**

Grade 12/HGP: 0.039"  $\pm$  0.005" (1.0mm  $\pm$  0.12mm)  
Grade 20/VGP: 0.028"  $\pm$  0.004" (0.7mm  $\pm$  0.10mm)

## **COLORS, PATTERNS, AND FINISH**

General purpose postforming Grade 12/HGP and vertical postforming Grade 20/VGP laminates are available in a broad selection of designs and colors. Standard finishes for each pattern are detailed in the Formica® brand Laminate Catalog (Form No. 02-080). Polished (-90) finish is not recommended for heavy-duty horizontal surfaces.

Samples are available from Formica Corporation specification representatives or directly from Formica Corporation. In the U.S. Call 1-800-FORMICA (option 1) or in Canada call 1-800-363-1405 for ZIP-CHIP service.

## **HOW TO SPECIFY**

Surface (and appropriate backing sheet) shall be Formica brand laminate from Formica Corporation, Cincinnati, Ohio.

COLOR NUMBER

COLOR NAME

GRADE

FINISH

SIZE

## **USE AND CARE**

Formica® brand laminate may be cleaned with a damp cloth and mild detergent.

If in doubt about the suitability of a particular cleaner or detergent, check with its manufacturer. Use of abrasive cleaners, powders, scouring pads, steel wool, sandpaper, etc., can damage the finish of the decorative surface.

Acid or alkaline-based cleaners, compounds, etc., will mar, etch, corrode, and permanently discolor the decorative surface of laminate. Never use these materials on laminate, nor allow bottles, rags, etc., contaminated with them to contact the surface. Accidental spills or splatters from these harsh materials should be wiped off immediately, and the area cleaned thoroughly with a damp cloth.

Examples of these materials are: drain cleaners, rust removers, coffeepot cleaners, metal cleaners, ceramic cooktop cleaners, tub and tile cleaners, chlorine bleach, oven cleaners, some countertop cleaners, disinfectants and toilet bowl cleaners.

### **LIMITED WARRANTY**

Formica Corporation expressly warrants that, for a period of one (1) year from the date of first sale, these products will be reasonably free of defects in materials and workmanship, and that when properly handled and fabricated, will conform, within accepted tolerance, to applicable manufacturing specifications. Colors subject to dye lot variations. This limited warranty only applies to Formica® brand laminate which is stored, handled, fabricated and installed in the manner recommended by Formica Corporation. Due to the variety of uses and applications to which Formica brand laminate may be put, FORMICA CORPORATION CAN MAKE NO WARRANTY THAT THIS PRODUCT IS SUITABLE FOR ANY PARTICULAR PURPOSE AND CAN MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE SET FORTH ABOVE.

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## **MANUFACTURER**

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## **TECHNICAL SERVICES**

Technical assistance may be obtained through your local Formica brand products distributor or from Formica Corporation trained representatives in sales offices throughout the country. To assist these representatives, Formica Corporation maintains a sales technical services staff in Cincinnati, Ohio. For technical assistance, contact your distributor or sales representative; write the company directly at Formica Corporation Technical Services Department, 10155 Reading Road, Cincinnati, OH, 45241; call (513) 786-3578 or 1-800-FORMICA (option 2); or fax (513) 786-3195. In Canada, call 1-800-363-9280. In Mexico, call (525) 530-3135.

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