Advisory Bulletin

BOBRICK
BUILDING VALUE SINCE 1906

TB-37 Core Material Used in Bobrick Toilet Partitions

1030/1040 Series

Particle-board is the substrate for most laminated plastic toilet partitions. It is fabricated of wood chips and flakes embedded in resins. The wood most commonly used in commercial particle-board is pine, a soft wood. Bobrick utilizes only *hem/fir* particle-board, engineered with fir, a favorite material for building construction, and hemlock, a hard wood.

Bobrick core stock is manufactured in a 3-ply configuration, with finely ground wood in dense resin on outer surfaces and coarser chips in the center. Comparing the strength of conventional and hem/fir particle-boards, both in nominal 45-pound density, provides the following results:

Property		Type of Particle-Board	
		Bobrick Hem/Fir	Standard Pine
Modulus of Elasticity		400,000 PSI	325,000 PSI
Modulus of Resistance		2,400 PSI	2,100 PSI
Internal Bond		100 PSI	60 PSI
Screw Holding:	Face	250 LB	225 LB
	Edge	225 LB	200 LB

1080 Series

Core is an inexact term when discussing solid phenolic material, since this material is fused into a homogeneous unit with its face sheets; there is no glue line, which is vulnerable to water penetration and delamination, between the core and the face material. Free-standing components are fabricated the same as the .050" (1.3mm) thick material that surfaces and protects the particle-board in 1030 and 1040 Series compartments, except it is built up to a self-supporting thickness of 1/2" (13mm) for divider panels and 3/4" (19mm) for stiles and doors.

A clear, tough melamine sheet is the outermost layer, followed by a colored or patterned face sheet, then multiple layers of specially fabricated kraft paper. All of these sheets are impregnated with resins and thermally fused, utilizing heat of 284° to 302° (140° to 150°C) and pressure of 1,000 psi.

The resulting *core* is normally dark brown, but Bobrick has its solid phenolic material fabricated with a dye to produce a more designer-appealing back edge.

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