

by KENN BUSCH

Lynden Door

Architectural Doors Made 'Green'

Composite Wood Cores and Skins Meet the
Toughest Environmental Building Standards

In our work over the years building multifamily housing, apartments and condominiums, one constant specification requirement has been for wood interior doors with no VOC content. Now, clients are demanding ever increasing levels of environmental friendliness." Craig Hess, AIA, CSI, is Vice President and Quality Assurance Director for Elness Swenson Graham Architects Inc. in Minneapolis.

In addition to multifamily projects, the firm also specializes in hotels and other larger commercial jobs. Hess says delivering on clients' expectations for green – friendly projects is easier when he can depend on suppliers' expertise.

"When I see a whole industry that has switched over to using products like MDF and particleboard, that tells me something about the success they're having with them."

Once such supplier, Hess says, is Lynden Door.

"We make residential, commercial and architectural doors for a wide swathe of the marketplace," says Mike Strauser of Lynden Door.

"Doors made with particleboard cores offer the best value and performance from an architectural standpoint, and are the mainstay of our interior door line...they're our number one seller.

"Our doors have all gone through extensive third – party testing, and have exceeded one million slam cycles," says

Lynden's Mike Moreno.

"Particleboard has been a standard construction material for interior doors since the 1960s. It offers the internal bond strength needed to handle the abuse doors have to take in applications like public buildings and schools, and has a surface smoothness perfect for applying overlays like laminates and veneers. Our suppliers can also get us lighter weight boards that are easier to handle and yet strong enough to meet our standards."

Composite combinations

"For our doors with paintable surfaces, we use a thin sheet of MDF on the faces and preprime the doors before they leave our factory," Moreno says.

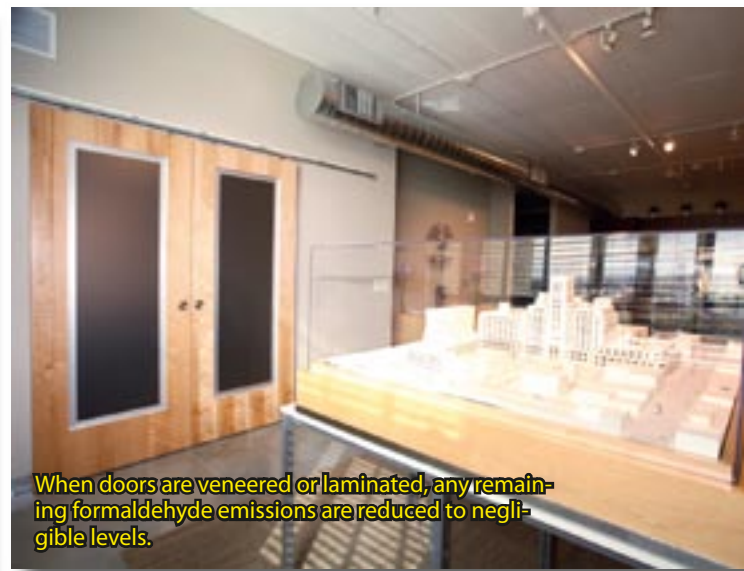
"Our molded skin doors use a thin MDF surface that's been molded to look like a variety of architectural door styles, from six-panel to shaker to European. The surface itself can be either smooth or have woodgrain ticking.

"Our main particleboard supplier machines profiles into the particleboard cores to accept the premolded MDF skins, so all we have to do is assemble and finish them as requested. It's a great example of these two composite materials working together in a product.

"Molded profile products are the mainstay of the residential industry today," says Moreno. "From a commercial standpoint,



Lynden Door satisfies the stringent environmental requirements of architects.



When doors are veneered or laminated, any remaining formaldehyde emissions are reduced to negligible levels.



Special agrifiber substrates and standard particleboard core made without urea-formaldehyde [UF] glue are used in doors specified for environmentally friendly projects.

they're used in anything from high-rise condominiums to the assisted living, hotel and hospitality industries."

"Our main particleboard supplier, Canpar, has been a great partner to us," says Strauser.

"They're good listeners and have a particleboard core made without urea-formaldehyde [UF] glue that was the result of a direct collaboration between our two companies."

All factory prefinishing is done with a UV-cured polyurethane finish that contains no solvents, eliminating VOCs. A majority of

the particleboard cores used by Lynden are SFI certified.

SFI – Sustainable Forestry Initiative – program participants practice sustainable forestry on all the lands they manage.

Particleboard and MDF are also inherently green-friendly – the chips and fibers used to make the panels are waste from other secondary wood-processing operations that would otherwise be landfilled or burned.

For projects looking for the ultimate in green-friendly interior doors, Lynden specifies an agrifiber board product made from recycled agricultural fibers. Sold as GreenDor, these doors contain no added formaldehyde.

"Most natural products have some natural level of formaldehyde in them," says Moreno. "Traditional particleboard resins also contain some formaldehyde. However, when you seal the panels with laminates and edges, the formaldehyde emissions drop to negligible levels."

Much of the formaldehyde found in indoor air actually comes from the carpeting because the adhesives used in

manufacturing carpeting have a very high percentage of UF as a bonding agent.

"The US Green Building Council's LEED rating program

encourages builders and designers to reduce the levels of formaldehyde in their projects, so our doors have become a popular choice for LEED-conscious architects," says Moreno.

"We've always seen our role as urging the industry to

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Design Guidelines and LEED Gold certification.

“In the research I did for that, and for a previous student housing project, I contacted the major commercial wood door manufacturers. What I heard from the other manufacturers is that they were at various stages of having products that would meet these requirements.

“Lynden’s competitors were seeing what is happening in the architectural marketplace and were trying to respond to it, but my impression is that Lynden Door is a step ahead of everybody else.”

PFA

continue to look at the adhesives, the processes and the fibers they use. It’s part of our effort to encourage and continue sustainable practices.”

Some of the green-friendly projects Lynden has recently supplied doors for include:

- A student housing project at California Polytechnic State University, San Luis Obispo. The 4,200 doors are constructed with a UF-free particleboard core (containing no added urea formaldehyde) and MDF composite faces; and,
- Agrifiber core doors for The Chicago Lofts, a residential tower in Minneapolis, designed by Elness Swenson Graham Architects Inc.

“I’ve been a licensed architect for 30 years and have always believed in the knowledge and experience of the fabricators and subcontractors,” says Hess.

“I’ve always been open to listening to them to see what works, what can make our projects better and richer.

“I’m currently working on a specification for a project for the University of Minnesota that has to meet both the State of Minnesota Sustainable