

Eovations™ extruded oriented technology produces a fully-fibrous lineal composite using a patented extrusion/drawing process.

Eovations™ technology is based on a patented, proprietary extrusion/drawing process that combines mineral particles with a thermoplastic matrix. The process yields a lineal composite material with a fully-fibrous and molecularly-oriented internal structure that is a remarkable analog of wood's fibrous network and structure. Densities between 0.5g/cc and 1.0 g/cc can be achieved with excellent control. Although no blowing agents are required, the extrusion process creates an internal closed cell structure that reduces material weight without sacrificing strength. Several thermoplastic polymers may be used with Eovations technology and, along with the wide processing window the process affords, a broad range of targeted final properties can be achieved.

Physical strength

Unlike most other composites, composite material produced using Eovations technology can be used in structural as well as non-structural applications. Its longitudinally-oriented fibrous construction provides strength that is unprecedented in an extruded thermoplastic lineal and puts material created with Eovations technology in a class with engineered wood components for structural use. The fully-fibrous structure also makes the material physically tough and durable with outstanding resistance to impacts, scrapes and marring. The composite material resists warping, twisting, sagging and dimensional changes that are shortcomings of other lineal composites.

Environmental durability

Composite material produced using Eovations technology exhibits excellent environmental durability. Extended immersion testing under vacuum shows maximum moisture absorption values of less than 0.2%, which gives the material an enormous advantage in weatherability, freeze-thaw stability and rot resistance. The composite doesn't support growth of mold and mildew, stands up to sunlight and high wind forces, and resists damage by microorganisms, insects, aquatic life and chemicals.

Aesthetics and decorability

Composite material can be produced by Eovations technology in a wide range of molded-in textures and colors to meet specific appearance and use requirements. It can also be factory- or field-coated with a variety of paints and coatings. The excellent weatherability and toughness of the material helps ensure lasting attractiveness.

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Workability like wood

The composite material created by the Eovations process can be sawn, drilled, planed, routed, milled and fastened using normal carpentry skills and conventional woodworking equipment. It provides excellent holding power for nails, screws and staples. Compared to wood, the fiber structure of the material provides greater resistance to splitting and makes Eovations material more forgiving of fastener placement errors.

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