

Composite materials created by Eovations™ technology overcome the limitations of other materials in a wide range of applications.

The oriented, fully-fibrous lineal composite material produced by Eovations™ technology is a candidate to replace wood, plastic, metal and wood-plastic composites in a wide range of structural and nonstructural applications. While product designers, architects and engineers are expected to continue to identify new uses for the material, anticipated early applications areas for Eovations-based composites include:

Building products

The unique combination of strength, light weight, physical toughness, low thermal expansion and moisture resistance provided by Eovations technology has never before been available in previous composite materials used in the building industry and exceeds the combined properties available from wood itself. Components made using Eovations technology can be fabricated to provide strength for use in structural applications where wood-plastic, cellular PVC and cement-fiber materials cannot perform. The material absorbs almost no water, retaining strength and stability in wet environments, submerged applications and through freeze-thaw cycling. Thermal expansion rates lower than other plastic materials make this composite an excellent alternative for use in windows and doors. Building materials that can be produced using Eovations technology include decking, railings, porch planks, deck substructures, roofing, exterior trim, siding, soffit, door frames and jambs, window components, PVC lineal reinforcements, porch and patio enclosures, decorative flooring, and flexible concrete forms.

Outdoor products

The weather resistance, strength, light weight, durability and easy workability of composite produced using Eovations technology make it a candidate for use in manufactured or site-built outdoor products. The material stands up to water, sunlight and hard use for years of virtually maintenance-free service. It also offers benchmark mold and mildew resistance and the composite surface is readily colorable during production or can be decorated with a variety of coatings, creating durable, attractive finishes. Outdoor applications include fencing, decking, outdoor furniture and benches, signage, mailbox posts, lamp posts, pergolas and gazebos, storage structures, and retaining walls.

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Marine

In marine applications, composite produced using Eovations technology offers the strength and toughness needed to stand up to pounding wave action, impact of boats and other abuse. The light weight material floats and absorbs almost no water, so it can be used in water exposure and full immersion applications. The composite will not rot and no waterproofing or chemical treatments are required so there is no danger of chemicals leaching into the water. It is also not subject to salt water deterioration or attack by marine organisms. Marine applications include docks and piers, seawalls, lock side rails, pontoon boat decking, hull and superstructure components, ship decking, pilings, bumpers, ski ramps, rear boat platforms, fiberglass boat structural braces, boat trailer skid boards, and on-dock structures.

Industrial and commercial applications

Composite material made with Eovations technology is versatile enough to be used in a wide range of industrial and commercial applications. It offers high strength-to-weight ratio, excellent impact resistance, flexural strength, resistance to water and chemicals, and long-term durability. The easy workability of the material simplifies on-site installation and repairs. Potential applications include utility flooring, platforms, work surfaces, loading docks, barriers, railing, walking surfaces, rig mats, temporary roads and flexible concrete forms.

Transportation and material handling

In the transportation and material handling industries, strength, toughness, light weight, water resistance and overall durability are critical requirements. Composite material made with Eovations technology can stand up to shifting loads, vibration, scrapes, impact, water and more. Screw, nail and staple fastener acceptance and holding power are excellent for secure fabrication. The material will not harbor insects, an important requirement in many international and domestic shipping applications. Uses include pallets, truck beds, utility trailers, temporary road beds and rig mats, signage, and specialty crating.

Parks and recreation

Structural strength, water resistance, toughness, weatherability and easy workability make composite material produced using Eovations technology well-suited for park and recreation applications, especially where treated lumber products cannot be used. Unlike wood, the composite is virtually splinter-free in playground structures, stadium benches and other high skin contact applications. Other uses include decking, boardwalks, siding, signage, guide rails, retaining walls, roofing, and trail and golf bridges.

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Agricultural

Composite material produced by Eovations technology can be used in farm, livestock and other agricultural applications where strength, water- and insect-resistance, weatherability, non-toxicity to animals, and virtually splinter-free performance are important. Livestock pens, feeding troughs, kennels, harvest bins, barn flooring and partitions, poultry coops, fencing and posts, nursery racks, trailer floors, sorting and processing fixtures, pallet boxes, trellis posts, and raised bed frames are a few of the agricultural applications identified to-date.

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