

InsituCore™

L&L Products®

INSITUCORE™ TECHNOLOGY

FOAMING MATERIALS FOR COMPOSITE MANUFACTURING.

InsituCore™ Foaming Core Technology is a family of one-component, heat-activated foaming materials that can be used to create composites with foam core. Placed in a heated tool, the material foams to fill the mold cavity and form net-shape parts without time-consuming machining processes or energy-intensive autoclave operations.

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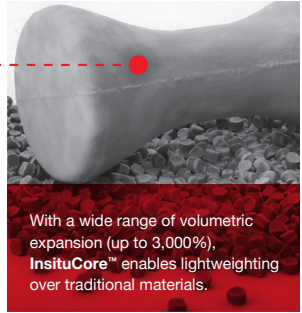
INSITUCORE™

INTERNAL PRESSURE ENABLES NET SHAPES

BENEFITS

With **InsituCore™** thermosetting and thermoplastic foaming materials, internally generated pressure is used to create net shape, 3D parts that are both lightweight and strong in a simple, clean process. Compared to traditional

manufacturing and machining methods, these materials enable faster cycle times, a reduction in waste material, and optimized production processes by eliminating secondary machining and assembly operations.



With a wide range of volumetric expansion (up to 3,000%), **InsituCore™** enables lightweighting over traditional materials.

KEY PRODUCT ATTRIBUTES



HIGH STRENGTH

- High compressive strength
- High stiffness-to-weight ratio with a wide range of volumetric expansion



PROCESS OPTIMIZATION

- Enables fast cycle times
- Minimal waste, low capital investment, and small manufacturing footprint
- Requires no liquid resin infusion



DESIGN FLEXIBILITY

- Good acoustic & thermal insulation
- Fire-resistant products available
- Enables lightweighting



SAFE & EASY HANDLING*

- No isocyanates
- Alternative to polyurethane foams

* Gloves are recommended. Always follow SDS guidelines for safe handling.

THREE STEPS TO A NET-SHAPE PART



1

Place the **InsituCore™** material into the cavity mold with reinforcement fiber layers.



2

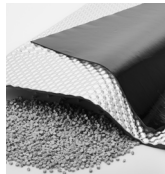
Close and heat the mold. The material foams, building pressure to fill the cavity completely.



3

Once cooled, open the mold and extract the structural foam part.

MATERIAL FORMATS



- Extruded sheets
- Pellets

APPLICATION EXAMPLES



- Aircraft tray tables
- Sporting goods
- Thermal insulation panels
- Lightweight wall panels, floors, doors, and hatch covers
- Automotive OEM & aftermarket parts



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