

INSITUCORE™ TECHNOLOGY

FOAMING STRUCTURAL MATERIALS FOR COMPOSITE MANUFACTURING.

*Developmental technology.

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

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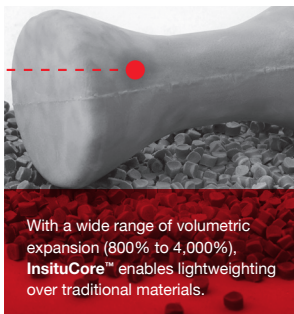
INSITUCORE™

INTERNAL PRESSURE ENABLES NET SHAPES

BENEFITS

With **InsituCore™**, 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 (800% to 4,000%), **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*
- Slugs*
- Die-cut sheets*
- Pellets**
- Pails & drums**

* Production scale-up

** Developmental stage

APPLICATION EXAMPLES



- Aircraft tray tables
- Sporting goods
- Heat shields
- Floor panels



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