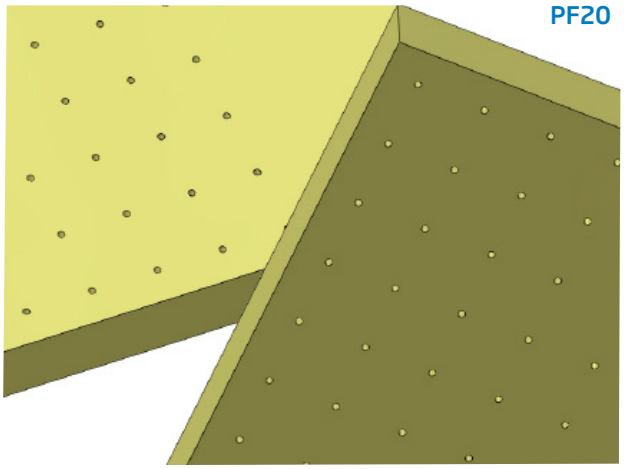
Finishing | Flow

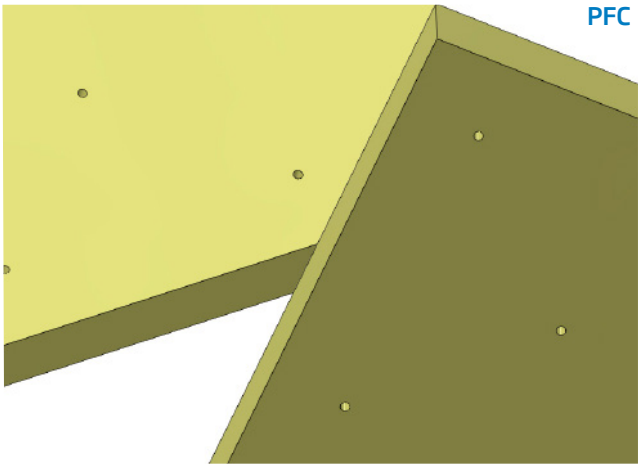
Perforated

Perforated material is designed to release trapped air from under the core and or allow resin to flow from one side of the core to the other.

PF20



PFC



Description

The material is perforated in different configurations, where the most common configuration is to have them 20mm apart.
PF20 is a preffered choice in weight critical applications, where vacuum bagging, infusion or prepreg techniques commonly are used. Due to the perforations it is possible to vacuum bag both inner and outer laminate in one operation, which yields cost and time savings in mentioned processes. PFC is commonly used to evacuate air in bonding processes.

Benefits

In closed molding applications where resin transfer techniques are used the perforations enables resin transportation through the core.
In vacuum bagging techniques it prevents air entrapments between mold / laminate and core.

Typical application areas

- Decks, topsides and hulls
- Panels
- Webs
- Bulkheads

Standard finishing types[1]

Configuration	PF20	PFC
Perforation Ø	2mm	3mm
Distance between perforations 0°	20mm	100mm
Distance between perforations 90°	20mm	100mm
Configuration perforations	Grid	Diamond[3]

1. Customized alternatives can be available upon request
2. Thickness and material choice impacts perforation diameter.
3. Offset 50mm in length and width direction, thus creating a diamond pattern.

Process characteristics

In resin transfer molding processes resin flow is perpendicular to the plane, "through the core", while resin flow in the plane is poor. Where resin flow in the plane or over the surface is of interest Diab refers to other finishing options.

Limitations and considerations

Resin consumption during infusion increases with core thickness.

Finishing solutions

Diab offers a comprehensive range of finishing options to deliver optimized solutions tailored to customer requirements and objectives. If the standard range does not meet specific needs, customized cuts and solutions can be developed. However, this is rarely necessary, as Diab's extensive offering and expertise cover the majority of industry demands

Kits

To fully optimize cost, performance, and quality, Diab can engineer and supply core kits delivered in lay-up sequence. These kits consist of precut pieces tailored to meet mechanical requirements, lay-up strategy, manufacturing process, and cost and quality goals.

Produced by skilled personnel using a combination of traditional and CNC equipment, the kits ensure precision and consistency.

By working with kits, customers benefit from Diab's full expertise in engineered design, core materials, and manufacturing techniques–key factors in achieving application objectives in terms of cost-efficiency, quality, and performance.

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