

# ADFORS INDUSTRIAL FABRICS

Your Partner for  
Composite Applications



Stronger ideas for a sustainable world



# ADFORS INDUSTRIAL FABRICS

## Your Partner for Composite Applications

ADFORS designs and produces innovative textile solutions for reinforcement in the construction and industrial markets. With an experience over 50 years, ADFORS benefits from a strong expertise in glass fiber technology through its VETROTEX® business, an extended knowledge in weaving & coating and a wide offering of fabrics.

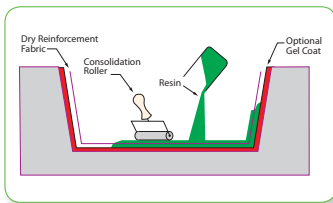
*ADFORS Industrial Fabrics product range for composite applications includes:*

- Glass veils,
- Laid scrim.

### Hand lay-up & spray-up processes for small & medium series production

#### Hand lay-up

Hand lay-up molding is used for the production of parts of any dimensions. But this method is generally limited to the manufacture of parts with relatively simple shapes that require only one face to have a smooth appearance. A gel coat, a layer of thermosetting resin and a layer of reinforcement are successively applied. The impregnation of the reinforcement is done by hand using a roller or a brush.



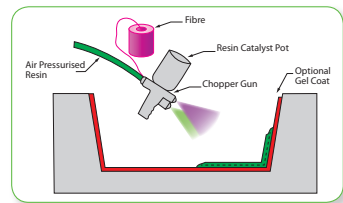
*Main advantages of both processes:*

- Widely used for many years,
- Easy processes to teach,
- Low cost way of quickly depositing fibre & resin,
- Lowest cost tooling.

*Glass veil used to improve the surface aspect.*

#### Spray lay-up

Similar to hand lay-up in simplicity, spray-up offers greater shape complexity and faster production. Spray-up utilizes a low-cost open mold, room temperature curing resin, and is ideal for producing large parts such as tub/shower units. Chopped fiber reinforcement and catalyzed resin are deposited in the mold from a chopper/spray gun. Then, rolling by hand to compact the mixture and eliminate the air bubbles.



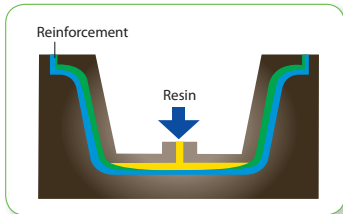
*Our product offering and its main benefits:*

- Wet laid veils with high aspect surface and low resin absorption: AW H 30 to 70 insoluble binder.
- Dry laid veils, very soft touch and conformable: AF L, soluble binder from 30 to 100 g/m<sup>2</sup>.

## Resin Transfer Molding (RTM) & infusion processes for medium & large series production

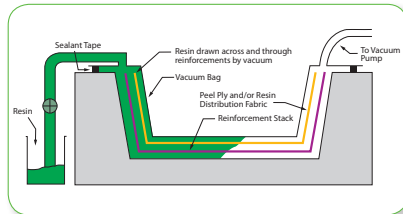
### RTM process

Process consisting in filling a rigid and closed mould cavity by injecting a resin through one or several points. The reinforcements are previously placed into the mould.



### Infusion process

The principle is to impregnate layers of dry reinforcement contained between a right airtight mould and a flexible sheet. A vacuum is applied to the mould cavity and resin is allowed to infuse into the reinforcement.



### Main advantages of both processes:

- Large components can be made,
- Cored structures can be produced in one operation.

### Glass veil used for:

- A good surface aspect with no porosity.

### Our product offering and its main benefits:

- Wet laid veils with high aspect surface and low resin absorption: AW 30 to 70, insoluble binder.
- Dry laid veils, very high conformability, long fibers allow as well deformability of the veil without breaks nor cracks.  
AF L, soluble binder from 30 to 100 g/m<sup>2</sup>.  
AG, insoluble binder from 30 to 100 g/m<sup>2</sup>.

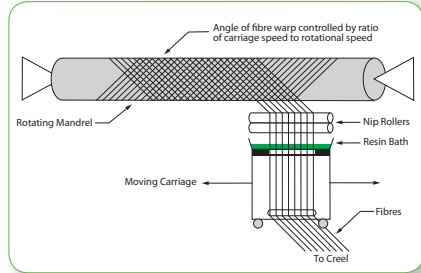


## Filament winding process is well suited to automation

The process involves winding filaments under tension over a mandrel. The mandrel rotates while a wind eye on a carriage moves horizontally, laying down fibers in the desired pattern. Once the mandrel is completely covered to the desired thickness, the resin is cured, often the mandrel is placed in an oven to achieve this. Once the resin has cured, the mandrel is removed, leaving the hollow final product.

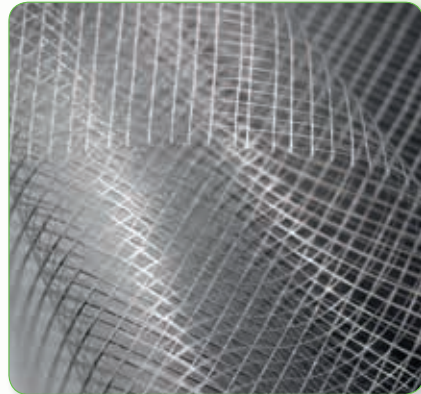
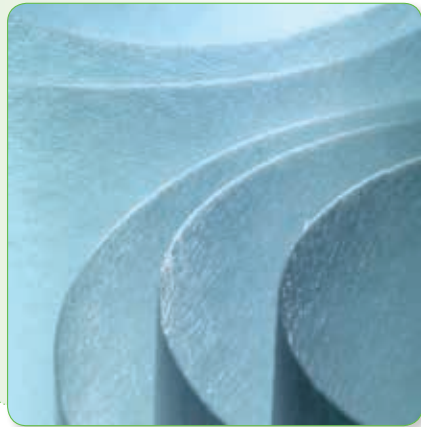
**Glass veil used for** aspect surface to avoid the start of corrosion points.

**Laid scrim used for** structural reinforcement.



Based on your needs, we can create infinite laid scrim combinations from a variety of high tensile strength fibers set at various angles to achieve the flexibility, durability and appearance you require.

Polyester	Dyneema®	Vectran®
Carbon	PBO Zylon®	
Aramid	Spectra®	



[www.adfors.com](http://www.adfors.com)

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