

## PTFE COATED FABRIC LAMINATES

A PTFE film laminate consists of PTFE films that have been laminated to a PTFE coated fibreglass fabric. While some PTFE coated products can perform adequately in the demanding conditions, overwhelming evidence has shown that a PTFE film laminate provides the best long-term protection for the fibreglass reinforcement.

PTFE coatings are inherently porous. Surface cracks in PTFE coatings permit harmful fluids to penetrate into the fibreglass substrates. Dip-coated PTFE/fibreglass materials often fail because the coatings are unable to provide an adequate barrier for the fibreglass. Unlike PTFE, fibreglass is easily attacked by light chemical exposure. Water is a very corrosive media to fibreglass. In a steam environment, failure will occur in weeks, if not days, for a PTFE-coated fibreglass material.

Surface cracks in PTFE coatings permit harmful fluids to penetrate into the fibreglass substrates. These cracks are totally unavoidable in any PTFE-coated fibreglass fabric. When a PTFE film is laminated to a PTFE-coated surface, the surface cracks remain sealed for the life of the product. The overall porosity and permeation properties in PTFE film laminates will be lower than those found in PTFE coated fibreglass fabrics. Additionally, the laminated PTFE film ensures that the composite maintains a uniform PTFE thickness over the entire surface. The tough PTFE film barrier makes cleaning easier and eliminates any concern for the "thin coating areas" found in all PTFE-coated fibreglass fabrics.

The material itself is offered in various thicknesses and which can be selected to suit a particular application. Standard thicknesses are 4thou, 9thou, 10thou and 12thou and are manufactured on a single ply of glass cloth. Thicker versions are also available as well as a range of 2ply and 3 ply products.

### APPLICATIONS

Techlam ptfе film laminates have great advantages when used as food processing conveyor belts.

The material itself can be used in two main food production sectors being bread and dough products or fat frying and grilling applications.

### FLAT BREAD & DOUGH

Examples of dough and bread production are demonstrated with the use of laminate belt when processing Tortilla breads and other flat breads. The tough laminated surface benefits over standard materials due to its ability to resist the resulting puncture of the belts surface from hard spots of dough being squashed under pressure from the top press platen. The result of this superior resistance of coated fabrics is a much longer life meaning less change over time and high production output.

### GRILLING & FAT FRYING

This is where Techlam ptfе coated laminates really come in to their own. The non porous film layer that is laminated to the ptfе coated glass cloth surface couldn't be more suited to these applications as they form a perfect barrier between the otherwise absorbent ptfе surface and the hot ingressive fat ever present on the belts surface when grilling or frying. In a huge amount of cases where laminated products have been used in place of conventional ptfе coated glass cloths life spans have seen weeks as opposed to days as with standard materials.

