



## Case Study in New Product Development (4)

### Requirement

- An expanded PTFE (ePTFE) sealing element with a width of 20mm, a thickness of 12.5mm and a step on one corner for fitment
- Specific gravity to be within 0.35

### Challenge

- Difficult to achieve a uniform density across such large cross section that is also not rectangular
- Density of 0.35g/cm<sup>3</sup> implies a very high stretch rate, which can cause slippage during stretching, leading to high and low density spots within the material



- Additional support given during stretching to attain consistent density
- Multiple extrusion dies developed before final dimension could be achieved – as shrinkage was not uniform due to the unique shape
- Special post extrusion process to ensure density does not increase after stretching and cooling