

## PPE Seals Used in Topicals filling and packaging lines at GlaxoSmithKline, Barnard Castle

Precision Polymer Engineering (PPE) has assisted GlaxoSmithKline to increase production uptime for its Topicals filling and packaging lines at Barnard Castle, Teesdale.

GlaxoSmithKline (GSK) is one of the world's leading research-based pharmaceutical and healthcare companies. The site at Barnard Castle manufactures over 50 products within three business units: Steriles & Liquids, Topicals and Cephs. As part of a manufacturing quality initiative, the company undertook a review of sealing on equipment used on a single Topicals filling and packaging line. The review was intended to give GSK a complete picture of the size and types of elastomer seals and other non-elastomeric seals, used on the line equipment.



PPE worked with GSK in confirming the size and identity of the elastomers used for each seal on the line. The strip down of each machine was filmed by GSK, showing how the seal was fitted. The review indicated that in some cases the dimensional accuracy of the seals could be improved. Moreover, changes to the type of elastomer to better match the Topicals chemistry and cleaning processes could also extend the plant's production time before a seal change was needed.

PPE systematically checked each filling and packaging line equipment seal. Seal accuracy was improved using PPE's CAD design and tooling machines to produce a highly accurate, moulded seal. It also recommended a switch to an alternative grade of fluoroelastomer for static sealing applications and the use of Perlast perfluoroelastomer, an elastomer developed specifically for pharmaceutical applications, for dynamic sealing applications such as pumps and valves.

In order to guarantee seal quality and consistency of supply, GSK requested that all seals are bar coded for stock control and traceability. All the seals supplied by PPE are FDA and USP Class VI compliant. In addition the seals are manufactured in a Class 10000 clean room to ensure each seal's cleanliness.

The outcome of the Topicals filling and packaging line sealing review was an increase in the production time between seals changes, compared with the more frequent seals changes before the review. Subsequently a further seven Topicals filling and packaging lines at Barnard Castle have been upgraded with the PPE seals.

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