Viton® Automotive Applications

Seals and Gaskets

Base-resistant Types of Viton® Set a New Standard

Current trends in automotive powertrain applications are pushing elastomeric seal materials to their limit. Materials that were once state-of-the-art are being asked to do more in an era of longer warranties, hotter engines and more aggressive lubricants that may shorten the life of existing elastomers.

For more than 40 years, Viton® fluoroelastomer has been the fluoroelastomer of choice because of its excellent heat and oil resistance. It has successfully displaced less thermally and chemically stable materials, but in some cases aggressive new lubricants are beyond the capabilities of standard fluoroelastomers. DuPont Performance Elastomers has developed new types of Viton® that perform in these more aggressive environments.

Available in the industry's broadest range of standard and specialty types, including new base resistant polymers as well as Viton® Extreme™ ETP, Viton® offers maximum performance in critical sealing applications such as fuel seals, quick-connect o-rings, fuel injection seals, valve stem seals and rotating shaft seals.

Viton® in Shaft Seals

Shaft Seals made from Viton® have long been the standard in high performance engine sealing applications where superior heat and fluid resistance are required. Designers routinely specify Viton® for critical sealing systems in engines, transmissions, differentials and gearboxes. As advanced lubricant technologies create more aggressive environments, base-resistant types of Viton® offer assurance of continued long-term seal performance under extremely demanding conditions.

Base-resistant Viton® fluoroelastomers

With the introduction of two new base-resistant types, the Viton® family of products now provides an even broader range of sealing solutions. Viton® TBR types offer excellent base resistance, as well as the high temperature performance and processibility of standard FKMs.

For applications that require better base resistance than standard FKM but don't require the optimum base resistance of Viton® TBR, Viton® IBR types offer a good balance of performance.

For extremely demanding applications that require better low-temperature performance along with improved base resistance and excellent hydrocarbon resistance, consider specialty types of Viton®, especially Viton® GFLT and Viton® ETP.

Selecting the Best Viton® fluoroelastomer for Powertrain

When selecting which Viton® to use in powertrain application, all aspects of the sealing environment must be taken into consideration. In powertrain applications, oil resistance has always been the primary need. But today, aggressive lubricants, fuels and low temperature performance can significantly impact the performance of sealing materials. The three major powertrain application areas have significantly different operating environments that must be considered in order to select the best Viton® for the sealing application.