

ORD Problem Solved!



V1289-75

Low temperature fluoroelastomer

V1289-75 is a fluorocarbon material with superior low temperature (-40°C TR-10) sealing properties compared to GLT type fluorocarbons, with comparable fuel resistance and mechanical properties. It has passed leakage testing requirements at -40°C in automotive and aerospace environments, exceeding all other fluorocarbon materials tested to date. Compound V1289-75 is designed to have the best low temperature properties of any fluorocarbon rubber compound available.

Rubber compounds lose spring force as they approach their TR-10 temperature. At around -15° C, V1289-75 generates approximately the same sealing force as a traditional A-type fluorocarbon compound. The A-type material, however, drops to near-zero contact sealing force at around -18°C while V1289-75 continues to show excellent retained sealing force down to -40°C.

In addition, the HTS oil resistance of V1289-75 is similar to that of GLT type fluorocarbon compounds. A-type materials typically harden and take a severe compression set, while GLT's perform quite well. V1289-75 matches this level of compatibility. As a result, V1289-75 can be considered an improved performance alternative to GLT type fluorocarbon or fluorosilicone technology in many applications.

For more information on this or any of Parker's O-Ring Division compounds, contact Parker's Applications Engineers or your local Territory Sales Manager.

Success Story

Application:

Jet fuel pump

Problem:

The customer was experiencing abrasion failure in their application while using a fluorosilicone O-ring. GLT and standard fluorocarbon compounds cannot pass low temperature testing. Additionally, concerns for high temperature and compression set eliminate fuel-resistant nitrile materials from consideration for this application.

Parker Solution:

Parker provided samples of V1289-75 to the customer. Parker developed compound V1289-75 utilizing an extreme low temperature fluorocarbon elastomer. This material offers similar or better fluid compatibility over fluorosilicone and GLT fluorocarbon polymers with improved low temperature performance. V1289-75 was able to withstand the aggressive conditions of the customer's application, eliminating unscheduled maintenance.

Outcome:

The customer tested V1289-75 prototypes in their application and submitted them to a full spectrum of fluid immersion tests. Not only did V1289-75 successfully pass the fluid immersion and vibration tests, but V1289-75 demonstrated successful static sealing down to -55°F. V1289-75 was approved for the application and Parker was awarded the full production volume purchase order.