

# ORD Problem Solved!

## HF355-65: A Cost Effective Option To FFKM



in sealing applications. This creates a challenge for those who are constantly trying to reduce cost of ownership (COO), because the most expensive seal might always work but might not necessarily be the best choice. On the other hand, it's tough to determine if a standard inexpensive material, such as FKM, will be a robust enough material to successfully seal.

In the Microelectronics (Micro-E) Industry, a wide range of chemistries are used across all processes and platforms. This widespread array of chemistries creates the need for a variety of elastomers to be used



## Success Story

### Application:

200mm HPCVD Turbo Gate Valve

### Problem:

A large North American flash memory fabricator was having issues with a widely used 200mm HPCVD platform. Standard FKM seals were degrading quite quickly on the turbo gate valve due to  $\text{NF}_3$  exposure. The customer was hesitant to move up to an FFKM material due to the higher costs ordinarily associated with that particular elastomer.

### Parker Solution:

Parker recommended a highly fluorinated elastomer from the HiFluor™ line, compound HF355-65. Parker's HiFluor materials are designed to bridge the technology gap between traditional fluorocarbon and perfluoroelastomers. Exclusive to Parker, HF355-65 provides the chemical resistance and cleanliness of an

FFKM while maintaining the thermal properties of a standard FKM.

### Outcome:

Parker supplied the customer with an HF355-65 seal sample. The customer then took the sample and ran side-by-side testing against the current standard FKM and a leading FFKM known for its use on the specific tool platform at hand. Both HF355-65 and the FFKM outperformed the incumbent FKM seal, running to failure at approximately the same time.

The added value of Parker's HiFluor material to the customer is found in its cost effectiveness compared to that of FFKM. HF355-65 provided the customer with a cost effective seal that still meets the demands of the application (resistance to  $\text{NF}_3$  exposure), maintaining a low COO among that tool population. The customer has since switched to HF355-65 and is running to the scheduled PM cycles with no problems.