

ORD Problem Solved!

Problems with Stiction?

Try Parker ULTRA™ Compound V8581-90!



Across all industries, most sealing applications have a variety of challenges to breakthrough in order to maintain a successful seal. However, just because a seal works doesn't mean there aren't other issues regarding the functionality of the seal. One of these issues is the sticking phenomenon that can

occur between an elastomer and the mating substrates that it is contained in. Commonly known as stiction, this problem typically isn't realized until a maintenance cycle occurs and it takes an extraordinary amount of time to remove the seal and replace it. These difficulties can cause damage to mating hardware and typically prolong equipment downtime to repair and replace used seals. In some applications within the microelectronics industry, using Parker ULTRA™ compound V8581-90 can relieve some of these issues.

Success Story

Application:

Vacuum chamber with an aluminum lid sealing against a ceramic substrate

Problem:

A semiconductor etch tool manufacturer was having issues with a competitor's FFKM seals sticking to the aluminum and ceramic sealing surfaces. The sticking problem was causing unreasonably longer PM downtime cycles. Additionally, tool hardware was being damaged during cleaning where rubber had stuck to the mating components.

Parker Solution:

Parker suggested ULTRA™ compound V8581-90. This compound is a white, 90 shore A, perfluoroelastomer that was developed for use in a wide variety of applications. Because of the hardness of this material, seals made from V8581-90 can maintain less intimate contact with mating hardware, reducing chances of stiction related issues.

Outcome:

The FFKM materials being used were causing a multitude of problems including melting, severe compression set, and severe stiction. After testing Parker ULTRA™ compound V8581-90, the customer approved the material, making it the standard seal material used in their equipment. The material resolved the customer's stiction problems, significantly reducing their downtime.