



MicroCare Medical Helps Manufacturer Save Time and Money While Improving Environmental Profile

SITUATION

A high-volume device manufacturer with global operations was having problems with a coating used on a hand-actuated surgical device. The device, assembled from 50 stainless steel and plastic components, comes together in a compact trigger-activated design. The engineers were using an improvised dry lubricant coating to beat tolerances and help the device actuate more smoothly. However, their dry lubricant powder was not giving a consistent coating resulting in highly variable actuation forces on finished devices. The manufacturer was mixing the carrier fluid and polytetrafluoroethylene (PTFE) powder in their assembly area, which created variability in the coating's consistency and effectiveness. In addition, the particles of the dry PTFE powder settled too quickly so the solution had to be constantly agitated in order to get a uniform coating. The carrier fluid used to apply the dry lubricant had a very high global warming potential.

SOLUTION

MicroCare Medical understands the machinery used in high-volume operations, and knows the importance of tight calibration of coatings to ensure consistent and repeatable device functionality. They introduced the manufacturer to a DuraGlide™ Dry Lubricant and a new, low-cost carrier fluid with a significantly improved environmental profile. With an average PTFE particle size half that of the dry PTFE powder, DuraGlide™ Dry Lubricants have excellent solids hang time and uniform coating consistency. This reduces actuation forces on treated devices by 30 to 40 percent while improving the "feel" of the device. MicroCare Medical delivered the custom lubricant to the manufacturer pre-mixed and calibrated to control the thickness of the coating, thus eliminating the variability of in-house mixing and reducing the cost of labor. When the DuraGlide Dry Lubricant treated devices were placed in their packaging for sterilization, there was no migration of the lubricant to the packaging.

RESULT

MicroCare Medical developed a solution that not only solved the problem of coating inconsistency, but also improved productivity and helped improve the manufacturer's environmental profile. As a result, the manufacturer was able to save on labor, carrying and material costs.

MicroCare Medical has become a trusted partner for the manufacturer. In fact, the senior engineering team routinely brings the MicroCare Medical team in early on the product development process so it can point out potential problems and offer suggestions for improving processes.