

HOW LUBRICANTS DRIVE SAVINGS AND PRODUCTIVITY

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Machine failures occur for a variety of reasons. Each one of these failures creates a ripple effect of costs and productivity loss. Some of these issues can be mitigated by choosing a high-performance lubricant—one that can withstand time and harsh environments. While high-performance lubricants are more expensive initially, the added expenditure is recovered through reduced breakdowns, downtime and maintenance costs, which results in long-term overall savings.

Find Compatibility and Productivity with High-Performing PFPEs

High-performance perfluoropolyether (PFPE) lubricants are inert, water and oil repellent, solvent resistant, nonflammable, non-toxic, and compatible with most common elastomers, plastics and metals. This unique chemistry enables them to [outlast](#) and outperform conventional hydrocarbon. PFPE lubricants perform under [extreme temperatures](#), [extreme pressure](#) and [exposure to harsh chemicals](#).

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Significantly Reduce Re-lubrication Intervals

It's common practice to use hydrocarbon or silicone-based lubricants to re-lube components on a daily, weekly or monthly basis. With PFPEs, that need is greatly reduced, freeing personnel for other tasks and minimizing downtime caused by the need to replace worn out components. **Following are a few examples of PFPEs driving performance, value and reducing downtime:**

PFPEs can Generate Savings

One copper rod manufacturer believed lubricating its rollers' bearings (operating temperatures over 200 °C [400 °F]) every four hours with a synthetic hydrocarbon grease was the longest lasting solution available. However, by switching to a PFPE lubricant, **they lowered re-lubrication to a monthly interval and cut annual bearing failures by nearly 98% (reducing replacements from 186 bearings each year to four)**. By switching to PFPEs, this manufacturer reduced maintenance costs, parts costs and production downtime. **A cost analysis showed a total annual savings of \$66,920.**



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PFPEs Can Extend Service Life

A U.S. textile manufacturer utilizes a hot flue drying oven as part of its process. In the drying oven, wet fabric passes along many bearing rolls inside a large metallic box, moving through nine heated zones with temperatures reaching 218 °C [425 °F]. The company was replacing at least six bearings per month due to premature bearing failures. Frequent downtime was adversely affecting productivity. Worse, fabric quality was compromised. The manufacturer needed a lubricant that would retain its integrity at high temperatures in high-humidity environments. After using a high-temperature PFPE grease, the manufacturer experienced a significant extension of bearing service life, minimizing costly downtime.



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PFPEs Can Limit Hazards

A polyethylene manufacturer was struggling with maintenance costs and frequent shutdowns of its high-capacity, sealed centrifuge because of hazardous material exposure. Specifically, a mineral oil lithium-thickened grease, used in the centrifuge bearings, leaked and led to premature bearing failures. The leaking hazardous solvent created an additional exposure threat to workers. The new lubricant needed to be non-reactive and insoluble to hexane, provide enough adhesion to avoid leaks, and remain fluid enough to deliver the required lubrication. The manufacturer turned to PFPEs. Since doing so, unplanned shutdowns and re-lubrication have both been reduced—with re-lubrication down to twice a year. These dramatic results decreased maintenance costs and increased worker safety.

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About Krytox™ PFPE Lubricants

Krytox™ lubricants are Chemours' line of high quality PFPE oils and greases, which have been proven to offer long-term performance and superior value. These lubricants are PFPEs, resulting in exceptional chemical stability. Therefore, they are thermally stable, nonflammable and insoluble in water, acids, bases, and most organic and all non-fluorinated solvents.

Additionally, Krytox™ lubricants are ISO 9001 and ISO 14001 certified, and several grades are NSF H-1.

For more products and information, visit Krytox.com/LubeValue, or call a Krytox™ technical expert:

In the U.S. and Canada 1-800-424-7502

Outside the U.S. 1-302-773-1000

The attributes of Krytox™ lubricants include:

Performance over a wide temperature range

Extreme heat or cold have no effect on the lubricity of these lubricants, effective from -75 °C to greater than 400 °C (-103 °F to 752 °F), depending upon operating conditions and product grade.

Resistant to chemical attack

Krytox™ lubricants withstand oxygen, acids and other aggressive substances.

Low evaporation

Krytox™ lubricants—within the recommended temperature ranges—experience almost zero evaporation or chemical changes over the many years of a machine's service life.

Compatibility

Krytox™ lubricants won't harm painted surfaces or most elastomeric materials. They are compatible with almost every material they may contact.



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