

Plastics and Elastomer Compatibility

Product Information

Krytox™ perfluoropolyether (PFPE) oils and greases thickened with polytetrafluoroethylene (PTFE) are a great choice for nonmetallic components.

Krytox™ oils and greases have been used as plastic or elastomer lubricants for over 40 years. Krytox™ PFPE oils and greases and Fluoroguard™ PFPE compounding additives are used as lubricants for nonmetallic materials in automotive, aerospace, and industrial applications for seals, gears, squeak elimination, and other critical uses.

Krytox™ oils and greases are inert and do not react with elastomers or plastics. These oils and greases will not cause elastomers or plastics to swell, shrink, or crack. Krytox™ lubricants do not hurt the performance of the elastomer, nor improve the upper temperature capabilities of the material—the thermal stability of the elastomer or plastic itself constitutes any limitation.

Krytox™ greases thickened with PTFE are equally non-reactive with polymers. Some types of grease that are used for lubricating metal bearings have additives for anti-corrosion and extreme pressure metal-to-metal contact, and they can affect some types of seal materials at higher temperatures. For high temperature applications, Chemours usually recommends additive-free oils and greases for lubrication of plastics and elastomers.

Krytox™ performance lubricants are resistant to oxygen and reactive gases, and are inert to virtually all chemicals that are commonly used in chemical processing and plastics manufacturing.

Most plastic materials contain other ingredients in addition to the specific plastic component. These include coloring agents, fillers, modifiers, anti-wear additives, and other ingredients to make the polymer work better under specific conditions. Because of the non-reactivity of Krytox™ lubricants and the many possible product combinations, Chemours does not test individual formulations for compatibility.

Following is a partial list of plastics and elastomers known to have been used with Krytox™ lubricants:

ABS	Nylon 6,6
Acetal – Homopolymer and Copolymer	Nylon 12
Aramids	PEBA
Buna N	PEEK
Butyl 325	Polyamides
Chlorosulfonated Polyethylene	Polycarbonate
Delrin® Acetal	Polyetheramide Block Copolymer
EPDM	Polyethylene
EPT, Peroxide Cure	Polypropylene
Ethylacrylate	PTFE Fluorocarbon
FEP	PVC
Fluoroelastomers	SBR
Fluorosilicone	SEBS
HDPE	Silicone
HNBR	Styrene Ethylene Butylene Polymer
Hydrocarbon Rubber	Styrenic Polymer
Hypalon® Synthetic Rubber	Teflon™ Fluorocarbon
Hytrel® Polyester Elastomer	Thermoplastic Polyurethane
LDPE	Thermoset Polymers
Methyl Silicone	Thermoplastic Rubber
Natural Rubber	TPE
NBR	TPU
Neoprene WRT	Urethane
Nitrile	Vamac® Ethylene Acrylic Elastomers
Nylon	Viton™ A and B Fluoroelastomers
Nylon 6	Zytel® Nylon

For higher temperature use with Kalrez® perfluoroelastomer, the user should ask for guidance on the proper grades.

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This information is not intended to provide guidance in selecting the appropriate product for your application. To ensure the best product for your application please contact our Technical Service Department at 1-800-992-2424 (in Canada please call 1-800-323-4621).

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