

# DuPont™ Krytox® PFPE

## performance lubricants

## Vacuum Pump Fluids Technical Characteristics

Krytox® PFPE vacuum pump fluids provide excellent lubrication for demanding applications in the semiconductor, aerospace, nuclear energy, and chemical processing industries. Its exceptional lubricity and compatibility with metals, plastics, and elastomers, plus the extra protection provided under severe operating conditions, make Krytox® products particularly useful in situations where failure is intolerable or shutdown costs are sizable in relation to the cost of components. Krytox® products are nonflammable and environmentally friendly.

### Important Operating and Safety Features

Krytox® provides chemical inertness to even the most aggressive agents, including Lewis acids. It offers thermal stability that ensures low decomposition rates and prevents the formation of gummy deposits. It also provides controlled viscosities and vapor pressures to ensure low backstreaming rates and maximize the ultimate attainable vacuum in a system.

Krytox® is not only fire resistant, but fireproof; it will not explode, ignite, or act as fuel for fires.

### Excellent Lubrication

Vacuum pump fluids are especially important in mechanical vacuum pumps and compressors. Their job is to lubricate and seal all moving parts, be noncontaminating, and, most of all, be durable. Krytox® performs this mission excellently, even under extreme loads and pressures.

### Regeneration

Once used, Krytox® can be transported to DuPont's Chambers Works facility in Deepwater, New Jersey. There, DuPont extracts any impurities before returning the vacuum pump fluid to the consumer for reuse.

Chambers Works is also home to DuPont's hazardous waste disposal facility. The toxic materials removed from Krytox® can be discarded in a certified, environmentally sound system, relieving the consumer of the troublesome chore.

### Additional Savings

The regeneration program is not only environmentally sound, it saves money. Krytox® can be reprocessed an unlimited number of times and offers a 95% yield, compared to 70% from less stable fluids. DuPont guarantees that the regenerated fluids meet new product specifications.

### How Is It Packaged?

All grades are available in 2, 4, 8, and 16-lb (as well as 1, 2, 4, and 8-kg) containers that have handles, easy-to-pour spouts, and are made of a sturdy, high-density polyethylene.

### How Long Is Its Shelf Life?

Indefinite. Unopened containers of these materials have shown no change in properties after 10 or more years of storage at ambient temperatures.

### What Grades Are Available?

Vacuum pump manufacturers recommend fluid grades based on vapor pressure and lubricity, which is related to the viscosity. Fluids should therefore be selected based on pump manufacturers' recommendations.

Krytox® 1500 series fluids are available in three grades. Other special grades are available for diffusion pumps or as manometer fluids. Guaranteed product specifications are published for each grade.

The table below shows the three grades of Krytox® 1500 series fluids and their viscosities. The vapor pressure of all these grades is  $10^{-7}$  torr at 20°C (68°F), which is one order of magnitude lower than competitive fluids.

Grade	Viscosity at 20°C (68°F), mm <sup>2</sup> /sec (cSt)
Krytox® 1506	60
Krytox® 1514	140
Krytox® 1525	250

Check with your manufacturer to determine what grade is recommended for your equipment. Discover that your manufacturer is one of many that now prefers Krytox® PFPE vacuum pump fluids to competitive brands of PFPE fluids.

### Who Sells It?

DuPont Chemical Solutions Enterprise

### Where Is It Made?

DuPont Chambers Works Plant  
Deepwater, New Jersey

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**For more information or technical assistance, call:**  
**or visit us on the Web:**

**(800) 424-7502**  
**<http://www.krytox.com>**

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Or call the Krytox® hotline in the **United States** at (800) 424-7502, E-mail: [krytox@usa.dupont.com](mailto:krytox@usa.dupont.com)

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