

#### CALIBRATED HELIUM LEAKS

	NEW F	il <b>-T</b> e	<b>ch</b> recalibration
CL7	10-7ccHe/sec	\$700	Certification \$375
CL8	10-8ccHe/sec	735	NIST Traceable Certification

# Nude Gauges & Filaments

Visit www.filtech.com for a complete listing of our nude gauges and replacement filaments.

AGILENT • AMAT • MKS

### Bayard Alpert Gauges/Pin Guards

Flange 2¾" • Header Ceramic to Metal Seal • Degas E-Beam Only

MKS		AMAT	DESCRIPTION	<b>Fil</b>	<b>Tech</b>
274028	\$580		Iridium Single	GB20IR	\$490
274043	657	3310-01081	Iridium Single With Pin Guard	GB43IR	645

#### **UHV Gauges/Pin Guards**

Flange 2¾" • Header Ceramic to Metal Seal • Degas E-Beam Only

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MKS		DESCRIPTION	<b>Fil</b>	-Tech
274022	\$580	Tungsten Dual	GU21T	\$460
274023	624	Iridium Dual	GU21IR	510
274050	591	Tungsten Dual, NW40KF	GU50T	560
274041	657	Tungsten Dual With Pin Guard	GU41T	580
274042	690	Iridium Dual With Pin Guard	GU42IR	615
274057	674	Tungsten Dual, NW40KF w/Pin Guard	GU57T	580
<b>AGILEN</b>	Γ			
X3004-64401	714	Iridium Dual	GU24IR	625
9715008	672	Tungsten Dual	GU24T	625

#### Replacement Filaments

AGILENT		DESCRIPTION	<b>Fil</b>	Fil-Tech	
9710018	\$121	Tungsten Dual	GF18	\$52	
X3004-64403	232	Iridium Dual	GF28	106	
MKS					
274024	199	Tungsten Dual	GF24	80	
274025	233	Tungsten Dual	GF25	106	
274029	199	Iridium Single	GF29	106	
One filament	per box				

### Fil-Tech Fluid vs Torrlube

Fil-Tech Fluid dramatically increases bearing life in vacuum and semiconductor processes by reducing friction. It has exceptional lubricating properties for sliding and rotating applications to 10-8 torr. Fil-Tech Fluid functions in a wide temperature range (-20°C to 260°C) and is chemically inert in the presence of most semiconductor gases such as fluorine at 200°C and trifluoride at 50°C.



# **Diffusion Pump Silicones**

All Fil-Tech's fluids are the functional equivalent to Dow Corning's DC702, DC704, and DC705, respectively. They can be mixed and/or reprocessed together in any portion with their

respective counterpart. Fil-Tech sells silicones!

FIL-TECH FT702, FT704 AND FT705 SILICONES REPLACE THE NO-LONGER-AVAILABLE DOW CORNING DC702, DC704 AND DC705 SILICONES

#### FT702 Phenylmethylsiloxane

is an economical general purpose silicone fluid for pumping large gas loads with thermal stability and oxidation resistance. Vacuum 10-5 to 10-7 torr.

#### FT704 Tetramethyltetraphenyltrisiloxane

is a single component fluid extensively used for applicators requiring rapid pump down of large gas loads. For performance and economics, your best choice. Vacuum 10-5 to 10-8 torr.

#### FT705 Pentaphenyltrimethyltrisiloxane

is a single component fluid for ultra high and ultra clean vacuums. For lowest ultimate pressure, your best choice. Higher resistance to crystallization.

Vacuum 10-5 to 10-10 torr.



	FT702	NEW	REPROCEESSING
	1 Gallon	\$440	\$195
	5 Gallon	2,000	
	FT704		
	500 cc	\$90	
	1 Gallon	550	195
	5 Gallon	2,500	
	FT705		
•	500 cc	\$140	
	1 Gallon	800	200
	5 Gallon	3,800	



Call Fil-Tech at 800-743-1743 for a free DOT approved pail to collect your used fluid for remanufacture.

#### TRADEMARKS

#### OTHER TRADEMARK OWNERS

Agilent® Agilent Technologies, Inc. Alcatel® Alcatel Vacuum Technology AMAT® Applied Materials, Inc. Axcelis® Axcelis Technologies, Inc. Chemours® The Chemours Company Convectron® MKS Instruments Dow Corning® Dow Corning Corp. CTI/Brooks® Brooks Automation, Inc.

Hastings® Teledyne Technologies, Inc.

High Performance® Ferrotec Corp.

INFICON® INFICON

Advanced Adhesion Alloy® Longer Life Gold®

Quality Crystals® Stress Relieving Alloy®

InstruTech® InstruTech

Intellemetrics® Intellevation Ltd. Ion Tech® Veeco Instruments, Inc.

Kaufman & Robinson® Kaufman & Robinson

Krytox® The Chemours Company FC, LLC Lam® Lam Research Corporation

Leybold® Oerlikon Leybold Vacuum

Maxtek® INFICON

MKS® MKS Instruments Novellus® Novellus Systems, Inc.

Phelps® Phelps Electronic, Inc.

Q-Sense® Biolin Scientific Holding, AB

Santovac® Arch Technology Holding, LLC

Satisloh® Satisloh GmbH

Sloan® Veeco Instruments, Inc.

SuperSource® Ferrotec Corp.

Telemark® Telemark

Temescal® Ferrotec Corp. Thermionics® TLI Enterprises, Inc.

TorrLube® The Torr Lube Company, LLC

ULVAC® ULVAC Technologies, Inc.

Umicore® Umicore

Unaxis® OC Oerlikon Corp., AG

Veeco® Veeco Instruments, Inc.

Windows® Microsoft, Inc.





# **SANTOVAC 5**

## **Polyphenyl Ether** Diffusion Pump Fluid

SANTOVAC® 5 will provide vacuums in the 10-10 torr range with exceptionally low vapor pressure and backstreaming. It is excellent for applications that must be free of silicones or those requiring ultra high, clean vacuums.

<b>SANT5-006</b>	65 cc	\$240
SANT5-01	100 cc	325
SANT5-05	500 cc	1,245
SANT5-1	1 Gallon	7,450

# **MECHANICAL PUMP FLUIDS**

#### **FT19**

Molecularly distilled hydrocarbon fluid for non-corrosive applications. FT19 works well for all mechanical pumps.

<b>SPECIFICATIONS</b>		SIZES	PRICE
Vapor Pressure @ 25°C	1 x 10-5 torr	1 Gallon	\$40
Viscosity @ 40°C	54 cst (251 SUS)	5 Gallon	130
Viscosity @100°C	8 cst (52.7 SUS)	55 Gallon	1,175

#### **FT20**

Doubly distilled hydrocarbon fluid for corrosive or reactive applications. Ideal for direct drive and belt driven mechanical pumps and also suitable for diffusion pump applications.

SPECIFICATIONS		SIZES	PRICE
Vapor Pressure @ 25°C	1 x 10-6 torr	1 Gallon	\$70
Viscosity @ 40°C	58 cst (269 SUS)	5 Gallon	270
Viscosity @100°C	8.5 cst (54.1 SUS)	55 Gallon	2,125

#### **FT70**

High grade oil with temperature resistance and wear protection with extreme load-carrying capability. FT70 is safe for yellow metals in single stage pumps that run hot.

<b>SPECIFICATIONS</b>		SIZES	PRICE
Vapor Pressure @ 25°C	1 x 10-4 torr	1 Gallon	\$55
Viscosity @ 40°C	75 cst (350 SUS)	5 Gallon	200
Viscosity @100°C	9.4 cst (58 SUS)	55 Gallon	1,450

#### **FT77**

Molecularly distilled hydrocarbon fluid for rotary piston pump in non-corrosive applications. It has the high viscosity required for the proper lubrication of piston pumps.

SPECIFICATIONS		SIZES	PRICE
Vapor Pressure @ 25°C	1 x 10-4 torr	1 Gallon	\$45
Viscosity @ 40°C	90 cst (418 SUS)	5 Gallon	160
Viscosity @100°C	10 cst (58.8 SUS)	55 Gallon	1,300

#### **FT87**

Molecularly distilled hydrocarbon for large rotary piston pumps and roots blowers in non-corrosive applications requiring higher viscosity fluids.

<b>SPECIFICATIONS</b>		SIZES	PRICE
Vapor Pressure @ 25°C	4 x 10-4 torr	1 Gallon	\$50
Viscosity @ 40°C	175 cst (800 SUS)	5 Gallon	185
Viscosity @100°C	20 cst (97 SUS)	55 Gallon	1,325



Fil-Tech stocks hydrocarbon oils for mechanical vacuum pumps in 1, 5 and 55 gallon sizes. Our oils are drop-in replacements for the industry standard fluids for roots blowers, rotary piston, and mechanical vacuum pumps used in corrosive or non-corrosive applications.

Call if you have questions regarding a cross-reference oil for your application.

#### **FT97**

Molecularly distilled hydrocarbon for large rotary piston pumps and roots blowers in non-corrosive applications requiring highest viscosity fluids.

<b>SPECIFICATIONS</b>	SIZES	PRICE	
Vapor Pressure @ 25°C	4 x 10-4 torr	1 Gallon	\$55
Viscosity @ 40°C	205 cst (950 SUS)	5 Gallon	200
Viscosity @100°C	18 cst (85 SUS)	55 Gallon	1,435

#### **FTTW**

#### TECHNICAL WHITE

Molecularly distilled hydrocarbon fluid containing no additives. Specifically recommended for mechanical pumps exposed to reactive or corrosive gases. FTTW is the longest lasting hydrocarbon fluid.

SPECIFICATIONS	SIZES	PRICE	
Vapor Pressure @ 25°C	<1 x 10-6 torr	1 Gallon	\$65
Viscosity @ 40°C	56 cst (260 SUS)	5 Gallon	270
Viscosity @100°C	9 cst (55.4 SUS)	55 Gallon	2,350

KRYTOX VACUUM PUMP FLUIDS

# Krytox\*

Authorized Distributor of Krytox™, a Brand of The Chemours Company

# Krytox® Fluid

Chemours Krytox fluids are totally perfluorinated polyether fluids (PFPE) that are suitable for the harsh environments associated with semiconductor processes. The fluids are chemically inert, thermally stable, oxygen resistant and nonflammable. Available with controlled low vapor pressures and viscosities. Applications include plasma etching, LPCVP and 100% oxygen service.



#### Remanufacturing Service

Fil-Tech's remanufacturing service restores your contaminated KRYTOX or other PFPE fluids to their original properties at high recovery yields. The cost is a fraction of the price of new fluid. Call for pricing.

Contact us for quantity discounts.

Call Fil-Tech for a free DOT approved pail to collect your used fluid for remanufacture. 800-743-1743

# Krytox Performance Lubricants \*\*Chemoury \*\*Chemoury

# **KRYTOX VACUUM GREASES**

Chemours has a series of Krytox (PFPE) vacuum greases suitable for various applications. Your viscosity, temperature and vapor pressure requirements will determine your choice of grease. All Krytox greases are inert and suitable for applications requiring high temperature stability and low vapor pressure. They show excellent resistance to the aggressive environments inherent in the semiconductor industry. Krytox greases are oxygen compatible and hydrocarbon free.

SPECIFICATIO	NS	2 oz	8 oz	Kg	TEMPERATURE RANGE	VISCOSITY AT 40°C	VAPOR PRESSURE AT 40°C
Electronic Grade	EG2000	\$124	\$452	\$2,240	-34°/288°C	240 cSt	2 x 10-8 torr
EG Greases	EG3000	124	452	2,240	-29°/316°C	440 cSt	6 x 10-9 torr
A - w 240	240AB	250	870	3,115	-40°/232°C	78 cSt	5 x 10-6 torr
Aerospace 240 Greases (milspec)	240AC	250	870	3,115	-34°/288°C	270 cSt	8 x 10-8 torr
	240AD	250	870	3,115	-29°/316°C	500 cSt	6 x 10-9 torr
Low Vapor Pressure Grease	LVP	124	455	1,830	15°/300°C	740 cSt	1 x 10-13 torr
General	GPL202	56	180	616	-63°/132°C	15 cSt	Standard Grade
	GPL203	54	172	595	-60°/154°C	30 cSt	Standard Grade
	GPL205	54	172	595	-36°/204°C	160 cSt	Standard Grade
Purpose	GPL206	54	172	595	-36°/260°C	243 cSt	Standard Grade
Greases	GPL207	54	172	595	-30°/288°C	450 cSt	Standard Grade
	GPL224	54	172	595	-51°/179°C	60 cSt	Anti Corrosion
	GPL226	54	172	595	-36°/260°C	160 cSt	Anti Corrosion
	GPL227	54	172	595	-30°/288°C	440 cSt	Anti Corrosion

# KRYTOX GENERAL PURPOSE OILS

Krytox GPL oils are clear, colorless, fluorinated synthetic oils that are non reactive, nonflammable, safe in chemical and oxygen service, and long-lasting.

	Kg	TEMPERATURE RANGE	VISCOSITY AT 40°C
GPL101	\$630	-70°/104°C	7.8 cSt
GPL102	630	-63°/132°C	15 cSt
GPL103	605	-60°/154°C	30 cSt
GPL104	605	-51°/179°C	60 cSt
GPL105	605	-36°/204°C	160 cSt
GPL106	605	-36°/260°C	243 cSt
GPL107	605	-30°/288°C	450 cSt