

Grease for Vacuum Equipment **ULVOIL[®] Z-300**

ULVOIL Z-300, a genuine ULVAC grease, has excellent lubricating properties and was made specifically for use in the extreme conditions of vacuum environments. Vacuum is already a key technology in various fields, including semiconductor production, chemicals, and foods. Z-300 is an ideal grease produced with extreme care to include only components well suited to the vacuum environment. This grease allows vacuum processes to be used in leading-edge technologies, where extreme care is required to prevent the introduction of contaminants.



Features

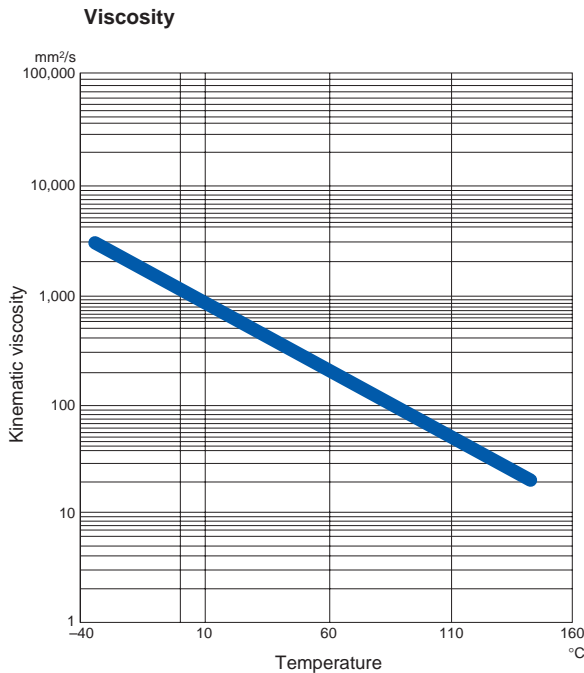
Z-300, a synthetic fluoride oil based grease, was made specifically for use in high vacuum environments. PTFE (viscosity adding agent) has been added in order to provide good lubricating characteristics under the vacuum conditions. In addition to reducing contamination of the vacuum environment to a minimum, high performance solid lubricating agents, including a low vapor pressure oil for the base oil, were selected and combined in order to maximize lubricating characteristics.

Z-300 Fluoride Grease Properties

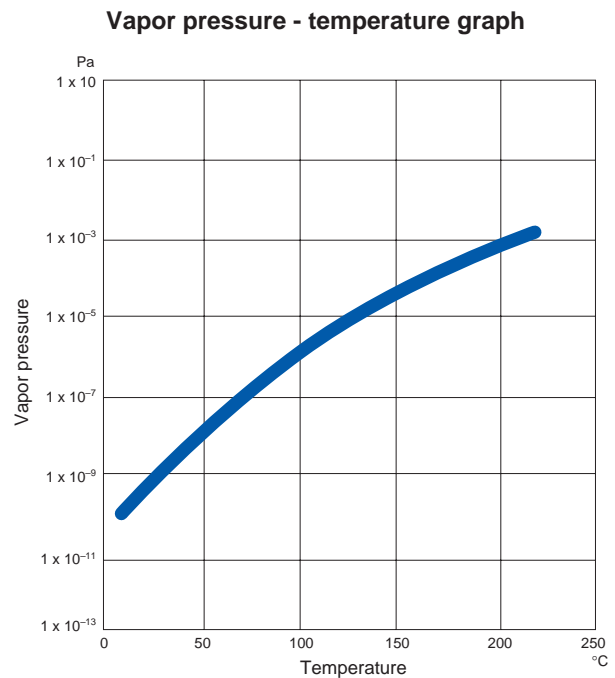
Test item		Test method	Z-300 fluoride grease
Appearance		—	White, viscous
Viscosity OW / 60 W		JIS K 2220 5 3	299/303
Oil separatory 200°C x 24Hr, °C		JIS K 2220 5 7	8.6
High temperature thin film (200 °C x 500 Hr)	Appearance		White, viscous
	Evaporation reduction %		0.0
	Viscosity OW / 60 W		270/292 (-29/-11)
	Values in () are the difference compared to new grease		
Low temperature torque Rotation (-40 °C) (GF, CM)		JIS K 2220 5 14	530
		Startup	380
Kinematic 20 °C			255
viscosity 37.8 °C			154
(mm ² /s) 98.9 °C			47
Viscosity index		JIS K 2220 5 3	355
Pour point °C		JIS K 2220 5 7	-66
Density: 20 °C (G/ML)			1851
Refractive index ND20		ABBE REFRACTOMETER	1.294
Surface tension: 20 °C (DYNE/CM)		DU NOUY	25
Evaporation (x 22Hr)	149 °C	ASTM D972	0.03
	204 °C		0.08
Vapor pressure (Pa)	20 °C	KNUDSEN	3.9×10^{-10}
	100 °C		1.3×10^{-6}
	204 °C		6.4×10^{-4}

Z-300: Technical Data

Viscosity



Vapor pressure



Cautions for use

In order to fully utilize the lubricating properties of Z-300, keep in mind that the grease is extremely adverse to mixture with other materials. Be sure to follow the instructions below when using the grease.

- 1 Keep the application location clean.
- 2 Use clean tools to pack the grease.
- 3 Keep the grease container clean and avoid grease contact with contaminants.
- 4 Parts where the grease is used should have a temperature of 250 °C or less.

Safety

Z-300 is harmless, with very high chemical stability and incombustibility. In addition, since the grease is insoluble in both water and oil, it does not accumulate in the body.

Z-300 properties

Viscosity adding agent
Component: Ethylene tetrafluoride resin
Content: 27-33 %

Base oil
Component: Perfluorooachil polyether Content: 67-73 %

