

APIEZON H High Temperature Vacuum Grease

- High temperatures
- Thermally conducting
- Good "stiction"
- Low to medium vacuum range
- Silicone free



Introduction

Apiezon H grease is the ideal choice grease for use at higher temperatures in a wide variety of applications in both science and industry. The table opposite shows the key features of the product.

Higher temperatures

Apiezon H grease can be used over a wide range of temperatures from -10 to +240°C, while optimum consistency is retained at between +10 and +110°C.

Apiezon H grease is a relatively stiff grease which does not melt, but in fact becomes stiffer as the temperature increases. It is specifically recommended for sealing and lubrication in high temperature applications, but not for highly stressed bearings.

Thermally conducting

Apiezon H grease is a filled hydrocarbon grease which exhibits excellent heat transfer properties

Allowing heat to conduct away from a site of operation, Apiezon H grease will reduce the danger of overheating and hence will limit the risk of damage to heat sensitive components.

Sticking power

Apiezon H grease is a very tenacious grease conferring excellent cohesive strength. With Apiezon H grease, gone are the days of loose fitting glassware and mated joints working loose.

"Stiction" power not only makes Apiezon H grease ideal for use with laboratory glassware, but combined with properties of high thermal conductivity, it is the perfect choice for the electronics and space industries where heat sink media require adhesion.

"Gettering" action

Apiezon H grease is manufactured from a unique feedstock containing a high proportion of branched and unsaturated hydrocarbons. These complex structures give Apiezon H grease a very high molecular weight and consequently strong powers of absorption, particularly for other hydrocarbon molecules.

Strong absorption properties ensure that Apiezon H grease has powerful "gettering" action, i.e. the power to absorb greasy or chemical impurities on metal and glass surfaces. This is of value in the electronics industry where scrupulous cleanliness is required.

Industry approvals

Apiezon H grease is extensively used in a wide variety of applications and industries. It has gained prestigious approvals from British Aerospace, the European Space Agency, Matra Marconi and NASA. Apiezon H grease has been approved by NASA as the only material suitable for lubricating the gold-plated threads of small variable capacitors required to operate under high vacuum from -65°C to +125°C to prevent galling.

Under vacuum

Apiezon H grease exhibits good vacuum properties in the lower to medium vacuum range at higher temperatures, while at lower temperatures; Apiezon H grease can be used in the high vacuum range. For full information on the vapour pressure of Apiezon H grease, refer to the vapour pressure curve above.

Typical Properties

Typical working temperature range, °C	-10 to 240
Dropping point – ASTM.D 566-02 °C	does not melt
Vapour pressure @ 20°C, Torr	1.7×10^{-9}
Relative density @ 20°C	0.918
Thermal conductivity @ 20°C, w/m °C	0.216
Specific heat @ 25°C, J/g	1.7
Lubricity 4 Ball Test – ASTM.D 2596-97(2002)e1, kg	250
Outgassing characteristics – ASTM .E 595-93(2003)e1	
TML	<1%
CVCM	<0.1%

Vapour pressure over working temperature range

Vapour Pressure, Torr

