

## APIEZON® AP100

Ultra High Vacuum  
Lubricating Grease

### Product Description

With a vapour pressure of lower than  $10^{-10}$  Torr at 20°C, Apiezon AP100 is a lubricating grease designed for use with equipment present within ultra high vacuum systems.

The key features of AP100 are shown in the table opposite.

<p><b>Apiezon AP100</b></p> <p>◆</p> <p>Ultra high vacuum range</p> <p>◆</p> <p>Anti-seize properties</p> <p>◆</p> <p>High load lubricant</p> <p>◆</p> <p>Ambient temperatures</p> <p>◆</p> <p>Silicone free</p>
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### Creep Resistance

As a hydrocarbon based grease, Apiezon AP100 is highly resistant to "Creep", a phenomenon associated with silicone-based products. This is where the grease travels away from the area of application and contaminates adjacent surfaces.

Creep is a particular concern in surface coating applications where poor surface adhesion and incomplete coating defects result from silicone contamination.

The creep resistance of Apiezon AP100 also benefits scientific and semiconductor users. Increased accuracy of analytical techniques is afforded by contamination avoidance, as are improved yields in semiconductor manufacture.

### Excellent Lubrication

Containing PTFE, Apiezon AP100 exhibits extremely high levels of lubricity. Indeed, with a lubricity 4 Ball Test value of 450kg, it provides eight times the level of lubrication offered by conventional petroleum based lubricating greases.

Apiezon AP100 is thus ideal for use in stepping motors and gearboxes where it affords protection against abrasion and corrosion, particularly under high load conditions.

It can also be used to prevent the seizure of glass joints, stopcocks and taps or the corrosion of small metal fastenings.

### Ambient temperatures

Apiezon AP100 is formulated for use at ambient temperatures.

For higher temperature applications, Apiezon AP101 or Apiezon H grease will provide more suitable alternatives. Separate data sheets are available for both of these products.

Typical Properties		
<i>Typical working temperature range,</i>	°C	10 to 30
	°F	50 to 86
<i>Dropping point – ASTM.D 566-02</i>	°C	42 to 52
	°F	108 to 126
<i>Vapour pressure @ 20°C / 68°F, Torr</i>		$7 \times 10^{-11}$
<i>Relative density @ 20°C / 68°F</i>		1.042
<i>Outgassing characteristics - ASTM .E 595-93(2003)e1</i>		
TML		<1%
CVCM		<0.1%
<i>Lubricity 4 Ball Test – ASTM.D 2596-97(2002)e1, kg</i>		450

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Continued

### Ultra High Vacuum

As the vapour pressure graph opposite demonstrates, Apiezon AP100 exhibits extremely low vapour pressure characteristics at ambient temperatures and can be used with confidence under ultra high vacuum conditions.

### Easily removed

Apiezon AP100 is easily removed by wiping with a soft clean cloth. Any residues of grease can be washed away with hot water (>50°C) and an aqueous glassware detergent.

AP100 works when you want it to, and is easily removed when you don't!

### Vapour pressure over working temperature range

Vapour Pressure, Torr

