Introduction

Apiezon L, M and N greases have been specifically developed for vacuum use, but are also extensively used for non-vacuum purposes in a variety of industrial and scientific applications.

A cross section of the key features of these products are shown in the table opposite.

High vacuum

Apiezon L grease has the best vapour pressure properties of all the hydrocarbon products and can be used in ultra high vacuum applications. M and N greases can be used in high vacuum conditions.

Vapour pressures for each grease over its working temperature range are shown in the graph below.

Ambient temperatures

Apiezon L, M and N grease are generally used at ambient temperatures, however Apiezon N grease is also widely recognised and recommended as the cryogenic vacuum grease of choice.

A full data sheet on the cryogenic vacuum uses of Apiezon N grease is available.

Added cushioning

Apiezon N grease has a special additive which gives it a tenacious, rubbery consistency. This provides an extra cushioning effect, which absorbs vibrations in equipment. N grease is thus invaluable for use in fragile glass to glass joints, like burette taps, which continually run the risk of fracture.

Long lasting lubrication

Apiezon L and M greases have been especially formulated to provide excellent lubrication while maintaining an efficient seal and are widely used in the manufacture and servicing of high performance vacuum pumps.

N grease, although a good lubricant at ambient temperatures should not be used as a lubricant at cryogenic temperatures.

Silicone free

As hydrocarbon-based greases, Apiezon L, M and N are highly resistant to "creep" or "carry over", a phenomenon associated with silicone-based products. Silicone has a tendency to travel away from the area of application and contaminate adjacent surfaces.

The creep resistance of Apiezon hydrocarbon greases benefits scientific users as it reduces sample contamination and the risk of interference in analytical techniques such as infra-red and mass spectrometry.

Silicone contamination is of particular concern in surface coating applications such as industrial paint or metal deposition processes, as trace amounts of silicone on surfaces prevent the adherence of paint and poor or incomplete coverage results. In semiconductor manufacture, yields can be severely affected by silicone contamination.

When using Apiezon hydrocarbon greases, the problems associated with silicone creep and contamination are avoided.
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### Shelf life

The shelf life of L, M & N greases is ten years from date of manufacture, providing the product is in the original unopened packaging and has been stored at ambient (10 to 30°C) temperature.

### Industry approvals

Apiezon vacuum greases have gained many prestigious approvals.

Examples include:
- Apiezon L grease
  - The European Space Agency
  - NASA
  - NATO
- Apiezon M grease
  - NATO
- Apiezon N grease
  - NASA
  - US Navy