

Materials Tip



Materials Engineering Branch

Apiezon Grease Usage Advisory			
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Apiezon greases are a highly purified, low volatility family of hydrocarbon products produced in England, for use in the laboratory. Initially after evaluating many versions of this product, there were at least three types that could be used in vacuum testing and in flight. These types were the Apiezon H, L, and N.

For over 20 years, they have been used successfully in numerous ways, mainly for lubrication, sealing or an interface medium, both in testing and in flight. A contamination situation caused a fortuitous discovery that, at least, the H and N versions of some lots were no longer meeting outgassing specifications. Further testing of more recent date codes of H, L, and N has led to the conclusion that the use of H for vacuum testing or flight can no longer be approved*. Type L has passed outgassing every time it has been tested and type N has passed on three of four lots tested.

Because of these inconsistencies in the product, the recommendation is to test each lot for outgassing before use. No matter what lubricant one may use, it appears to be the tendency of most users to employ excessive amounts. One should use only the minimum amount needed to accomplish the task at hand. Gross overuse of this type of material has been responsible for numerous contamination events.

* Results of Apiezon H testing:

<u>Lot #</u>	<u>% TML</u>	<u>% CVCM</u>	<u>% WVR</u>
Unknown	0.25	0.02	-----
Unknown	0.85	0.34	0.06
010195	0.82	0.42	0.06
810317	1.21	0.54	0.06
860718	1.30	0.65	0.08