

Tech topic

Aviation grease color

Color is not an indicator of grease quality or suitability

Key insight

Dyes and pigments impart

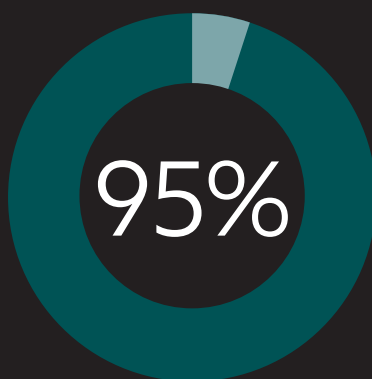
color only

and have no effect on a grease's lubricating capability.

Introduction

Depending on the application, grease can present several benefits over fluid lubrication. Greases provide a physical seal preventing contamination ingress, resist the washing action of water and can stay in place in an application, even in vertically mounted positions. Greases are manufactured by combining three essential components: base oil, thickener and additives.

Base oils



Base oil comprises up to 95 percent (by weight) of grease. Base oil may be mineral oil, synthetic oil or any fluid that provides lubricating properties; however, all aviation greases use synthetic base oil. It is the base oil component that performs the actual lubrication, except in very slow or oscillating applications.

Thickeners

Thickeners for aviation greases include soap — such as aluminum, calcium and lithium — clay, and any material that holds the base oil or will produce the solid to semifluid structure.

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Additives

Additives are required to protect the component against wear, rust, corrosion and oxidation. As in lubricating oil additives, grease additives and modifiers impart special properties or modify existing ones. Additives and modifiers commonly used in lubricating greases are oxidation or rust inhibitors, extreme pressure (EP) additives, antiwear agents, lubricity or friction-reducing agents, and dyes or pigments.



The color of aviation greases depends on the requirement of the specifications, OEM (Original Equipment Manufacturer) qualifications and/or QPL (Qualified Product Lists). Dyes or pigments are added like any other additive and impart the required color to the grease for easier product identification. Batch to batch, variations are normal, and varying shades of color have no effect on the grease's lubricating capability.

Grease color spotlight



Mobil™ Aviation Grease SHC™ 100 grease can have varying shades of red. Possible causes include:

- Very minor variation in quantity of an amine antioxidant in the grease
- Temperature variation during manufacturing
- Inappropriate product storage

All these variations are normal and are not an indication of product quality.

For more information

Please contact your ExxonMobil aviation sales representative.