



Molub-Alloy 243 Arctic

Arctic Grease

Description

- Molub-Alloy™ 243 Arctic Grease is intended for use in plain and anti-friction bearings operating in freezing environments down to -65°F (-54°C). It is designed to meet the performance requirements of MIL-G-10924C Specification.
- For effective lubrication in very cold temperatures, a primary requirement of grease is that it remain soft and pliable, especially in rolling element bearings. Stiff grease in anti-friction bearings can prevent rolling at start-up or allow skidding during operation, possibly resulting in damage and early failure.
- Of equal importance for greases in very cold regions is the ability to protect against corrosion. As temperatures drop from daytime operation to overnight freezing, moisture from the air is precipitated on the cooling metal surfaces. Bearings experiencing wide temperature fluctuations are particularly subject to corrosive attack.
- Molub-Alloy 243 Arctic Grease fulfills these most difficult requirements as a truly multi-service grease for transportation and industrial operations in very cold environments. Beyond the requirements of the Military Specification, the anti-wear and load-carrying characteristics of this grease are fortified with a proprietary blend of Molub-Alloy lubricating solids.
- The high quality base oils and thickening system used in Molub-Alloy 243 Arctic Grease were selected for their combined ability to maintain a good working consistency throughout a wide temperature range.
- The product is inhibited against oxidation, and particularly against corrosion as a major hazard of the low temperature service for which it was designed.
- Also included, in complete dispersion, are metallic lubricating solids of suitable grade and particle size for anti-friction bearings. Molub-Alloy lubricating solids are specially treated to improve their natural affinity for metal surfaces.
- The consistency of Molub-Alloy 243 Arctic Grease is slightly less than the NLGI Grade No. 2 required by the Military Specification. Importantly, however, the apparent viscosity, or working consistency, at -65°F is well below the maximum specified.

Application

- May be used as a multi-service lubricant through the broad range suggested by MIL-G-10924C as from -65°F (-54°C) to 225°F (79°C).
- Applications include journal bearings as well as antifriction bearings found in pumps, motors, conveyors, etc.
- Common applications are in transportation and material handling equipment, whether in arctic regions or in refrigerated areas in general industry.
- Applications at low temperatures should be made manually. Automatic dispensing equipment may be used at higher temperatures, as with greases of similar consistency. If automatic dispensing below 0°F (-18°C) is necessary, or extreme pressure characteristics are required, CASTROL Molub-Alloy 333 EP Light Arctic Grease may be suggested. (See Notes)

Advantages

- Maintains good working and staying consistency over suggested use range.
- Excellent protection against corrosion in presence of condensing moisture.
- Substantial increase in the service life of both parts and lubricant will result from the proper establishment of a protective layer of Molub-Alloy solids. These lubricating solids can effectively increase the load bearing area, thus reducing unit pressures and wear.
- Realistic energy savings are possible through a reduction in peak power demand during cold startup.
- Overall savings are derived from the above and result from less labor and downtime, smoother, more efficient operation with longer parts life, and extended lubrication cycles.

Typical Characteristics

| Name | Method | Units | Molub-Alloy 243 Arctic |
|-----------------------------------------------------|------------------------|--------------------|------------------------|
| Thickner type | - | - | Calcium |
| Worked Penetration (60 strokes @ 25°C / 77°F) | ISO 2137 / ASTM D217 | 0.1 mm | 285-315 |
| Dropping Point | ISO 2176 / ASTM D566 | °C/°F | 140 / 284 |
| Base Oil Viscosity @ 40°C / 104°F | ISO 3104 / ASTM D445 | mm ² /s | 13 |
| Flash Point - open cup method | ISO 2592 / ASTM D92 | °C/°F | 160 / 320 |
| Pour Point | ISO 3016 / ASTM D97 | °C/°F | -54 / -65 |
| Rust Test (distilled water) | ASTM D1743 | Pass | Pass |
| Rust Test - EMCOR (distilled water) | ISO 11007 / ASTM D6138 | Pass | Pass |
| Oxidation Stability - Rotating Pressure Vessel test | ASTM D942 | pressure drop psi | 3.0 |
| Oil Separation (24 hrs, 0.25 psi, 25°C / 77°F) | ASTM D1742 | %wt | 4.5 |

Additional Information

Lubrication intervals should be increased gradually to ensure complete removal of previous lubricant and the establishment of the surface layer of Molub-Alloy lubricating solids.

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