Pure Synthetic Grease

DS-460-F

Product Description

DS-460-F pure synthetic grease is formulated with a polyalphaolefin (PAO) base fluid to provide extended service life and wide temperature range capability. Coupled with a high performance additive package, this new product is a real multipurpose lubricant which can effectively handle a wide range of applications.

The growing trend to extend intervals between lubrication, increasing use of sealed-for-life bearings, increased shock loading, and vibration impose increasingly stringent demands on grease performance. The polyalphaolefin base fluid in this product is similar to mineral oils. Therefore, seal materials compatible with conventional petroleum products are also compatible with DS-460-F.

DS-460-F is part of a family of new high performance synthetic lubricants especially designed to meet the requirements of the food industry. For the first time, a truly high performance grease is available for applications with indirect food contact. It is authorized by the USDA for us in federally inspected meat and poultry plants and complies with FDA 21 CFR 178.3670, lubricants for incidental contact with food.

Outstanding Features

- Wide operating temperature range
- Excellent torque characteristics as low as -54°C (-65°F)
- Soft and serviceable to -62°C (-80°F)
- Very high dropping point of 274°C (526°F)
- Long bearing life at elevated temperatures and high speeds
- Provides long term lubrication at 204°C (526°F)
- Exceptionally good resistance to oxidation and water washout.
- Very good extreme pressure and anti-wear properties
- Consistency maintained under extensive shearing

Typical Applications

- Anti-friction bearing over wide temperature ranges
- Splines, screws, grease lubricated worn gears and other mechanisms with steel-to-steel or steel-to-bronze surfaces
- Bearing applications where oscillatory motion and vibration create problems
- Food processing equipment

Typical Properties*

Base Oil Properties	U.S. Steel Mobility Test
Viscosity, Kinematic	No. 1 Capillary, 150 psi, Flow
33.87 cSt @ 100°F, 6 cSt @ 210°F	50.2 g/s @ 25°C (77°F)
Viscosity, Saybolt	1.76 g/s @ -17.8°C (-0.04°F)
158.6 SUS @ 100°F, 46 SUS @ 210°F	0.40 g/s @ -28.9°C (-20.2°F)
Viscosity Index	0.081 g/s @ -40.0°C (-40.0°F)
137	0.064 g/s @ -45.9°C (-45°F)
Pour Point	0.039 g/s @ -53.9°C (-65.2°F)
-68°C (-90°F)	nil @ -62.2°C (-79.6°F)
Timken E.P. Test per ASTM D2509, OK Load	Flash Point
40 pounds	435°F (224°C)
NLGI Number	Rust Prevention per ASTM D1743
1,2	1-1-1
Specific Gravity (water = 1)	Dropping Point
0.79 - 0.81	526°F (274°C)
Penetration per ASTM D217 @ 25°C, mm/10	Roll Stability per ASTM D1831
315, unworked	315, penetration before
326, worked 60 strokes	325, penetration after
385, worked 100,000 strokes	+10 points consistency change
Copper Corrosion, FTMS 791-5309, 24 hrs., 100°C	Appearance
no corrosion	brown grease
Evaporation per ASTM D2595, 22 hrs., 177°C	Odor
4.4%	none
Wear Test, 4 Ball per ASTM D2266, average scar diameter	E.P. Test, 4 Ball per ASTM D2596
0.62 mm	50 LWI, 250 Kg weld point
Leakage Tendencies per ASTM D1263, (Mod.)	Oxidation Stability per ASTM D942, pressure drop
24 hours, 121°C (250°F)	2.5 Kpa @ 100h
no deposit on bearing surface	5.0 Kpa @ 200h
0.5g leakage to hub	5.0 Kpa @ 300h
1.0g leakage to collector	12.5 Kpa @ 400h
1.5g total leakage	17.5 Kpa @ 500h
Water Washout per ASTM D1264, grease loss	Low Temperature Torque @ -54°C (-65°F) per ASTM D1478
0% @ 37.8°C (100°F)	1268 g-cm, starting
0% @ 79.4°C (175·°F)	228 g-cm running (1hr)
High Temp. Performance, FTMS 931-333, pope spindle	Oil Separation, FTMS 791-321, 30 hrs., 177°C
+700 hrs. @ 100,000 rpm and 177°C for size 204 brg.	7.05%

*These values are not intended for use in preparing specifications.

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