## TRIBOLUBE-81

## Synthetic Hydrocarbon Greases

## CHARACTERISTICS

Tribolube-81 is a multipurpose synthetic grease developed for military aircraft high-speed turbine engine bearings ( conforming to MIL-PRF-81322). It has excellent long life and antirust properties for service at temperatures ranging from $-65^{\circ} \mathrm{F}$ to $350^{\circ} \mathrm{F}$.

## APPLICATIONS

Tribolube-81 is highly recommended for use in a wide range of industrial equipment. Use on O-rings, seals, gears, ball, roller, and plain spherical bearings.

| PERFORMANCE TEST | TEST METHOD | CONDITION | TYPICAL VALUES |
| :---: | :---: | :---: | :---: |
| Temperature Range |  |  | -80 to $400^{\circ} \mathrm{F}$ |
| NLGI No. |  |  | 2 |
| Unworked Penetration | ASTM D-217 | @ $77^{\circ} \mathrm{F}$ | 270 |
| Worked Penetration | ASTM D-217 | 60 strokes | 285 |
| Worked Stability | FED-STD-791 <br> Method 313 | 100,000 strokes | 340 |
| Dropping Point | ASTM D-2265 |  | $276{ }^{\circ} \mathrm{C}$ |
| Evaporation | ASTM D-2595 | 22 hrs @ $210^{\circ} \mathrm{F}$ | 0.50\% |
|  |  | 22 hrs @ $350^{\circ} \mathrm{F}$ | 7.98\% |
| Oil Separation | $\begin{aligned} & \hline \text { FED-STD-791 } \\ & \text { Method } 321 \\ & \hline \end{aligned}$ | 30 hrs @ $212^{\circ} \mathrm{F}$ | 0.80\% |
|  |  | 30 hrs @ $350^{\circ} \mathrm{F}$ | 4.90\% |
| Water Washout | ASTM D-1264 | 24 hrs @ $105^{\circ} \mathrm{F}$ | 7.00\% |
| Oxidation Stability | ASTM D-942 | 100 hrs @ $212^{\circ} \mathrm{F}$ | -2.5 psi |
|  |  | 500 hrs @ $212^{\circ} \mathrm{F}$ | -9.0 psi |
| Dirt Count | $\begin{aligned} & \hline \text { FED-STD-791 } \\ & \text { Method } 3005 \\ & \hline \end{aligned}$ | 25-74 Microns | 40/cc |
|  |  | over 75 Microns | 0/cc |
| Rubber Swell | FED-STD-791 Method 3603 | $\begin{gathered} \text { "L" stock } \\ 168 \mathrm{hrs} @ 158^{\circ} \mathrm{F} \\ \hline \end{gathered}$ | 4.0\% |
| Rust Preventative Properties | ASTM D-1743 | 48 hrs @ $125^{\circ} \mathrm{F}$ | Pass |
| Load Wear Index | ASTM D-2596 | @ $77^{\circ} \mathrm{F}$ | 54.65 |
| LastNon-seizure |  | Load/Wear Scar | $100 \mathrm{~kg} / 0.43 \mathrm{~mm}$ |
| Last Seizure |  | Load/Wear Scar | $160 \mathrm{~kg} / 0.78 \mathrm{~mm}$ |
| Weld Point |  | Load | 200 kg |
| Steel-on-Steel Wear | ASTM D-2266 | $\begin{gathered} 1,200 \mathrm{rpm}, 40 \mathrm{~kg}, \\ 1 \mathrm{hr} @ 167^{\circ} \mathrm{F}, \\ 52100 \text { Steel } \\ \hline \end{gathered}$ | 0.5 mm |
|  |  | $\begin{gathered} 1,200 \mathrm{rpm}, 40 \mathrm{~kg}, \\ 1 \mathrm{hr} @ 350^{\circ} \mathrm{F}, \\ 52100 \text { Steel } \\ \hline \end{gathered}$ | 0.8 mm |
| Coef. of Friction |  | $\begin{gathered} 1,200 \mathrm{rpm}, 90^{\circ} \mathrm{F} \\ 15 \mathrm{~kg} \text { Load } \\ \hline \end{gathered}$ | 0.09 |
| Gear Wear | $\begin{aligned} & \hline \text { FED-STD-791 } \\ & \text { Method } 335 \end{aligned}$ | $\begin{aligned} & 1,000 \text { Cycles } \\ & 5 \mathrm{lb} \text { Load } \\ & \hline \end{aligned}$ | 0.68 mg |
|  |  | $\begin{gathered} 1,000 \text { Cycles } \\ 10 \mathrm{lb} \text { Load } \\ \hline \end{gathered}$ | 1.60 mg |
| High Temperature Performance | ASTM D-3336 | $300^{\circ} \mathrm{F}, 10,000 \mathrm{rpm}, 50 \mathrm{lb}$ | 2,500 hrs + |
|  |  | $350{ }^{\circ} \mathrm{F}, 10,000 \mathrm{rpm}, 50 \mathrm{lb}$ | 525 hrs |
|  |  | $350^{\circ} \mathrm{F}, 10,000 \mathrm{rpm}, 5 \mathrm{lb}$ | $1.000 \mathrm{hrs}+$ |
|  |  | $400^{\circ} \mathrm{F}, 10,000 \mathrm{rpm}, 5 \mathrm{lb}$ | 264 hrs |
| Low Temperature Torque | ASTM D-1478 | @ - $65^{\circ} \mathrm{F}$, Starting | $3,040 \mathrm{~g}-\mathrm{cm}$ |
|  |  | running | $410 \mathrm{~g}-\mathrm{cm}$ |
| Corrosion on Copper | ASTM D-4048 | 24 hrs @ $212^{\circ} \mathrm{F}$ | 1B |

