RED LINE SYNTHETIC OIL

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Synthetic Suspension Fluids

LikeWater!® Suspension Fluid
Vis @ 100°C = 2.3 cSt
Vis @ 40°C = 5.3 cSt
VI = 397
$V_{40°C}/V_{100°C}$ = 2.290
Flash Point = 152°C (305°F)
Freezing Point = -31°C (-23°F)
Density @ 60°F(15.5°C) = 0.800

ExtraLight Suspension Fluid - 2.5W
Vis @ 100°C = 4.0 cSt
Vis @ 40°C = 8.3 cSt
VI = 539
$V_{40°C}/V_{100°C}$ = 2.080
Flash Point = 152°C (305°F)
Freezing Point = -31°C (-23°F)
Density @ 60°F(15.5°C) = 0.805

LightWeight Suspension Fluid - 5W
Vis @ 100°C = 7.5 cSt
Vis @ 40°C = 16.0 cSt
VI = 519
$V_{40°C}/V_{100°C}$ = 2.136
Flash Point = 152°C (305°F)
Freezing Point = -33°C (-27°F)
Density @ 60°F(15.5°C) = 0.814

Medium Suspension Fluid - 10W
Vis @ 100°C = 13.6 cSt
Vis @ 40°C = 32.0 cSt
VI = 442
$V_{40°C}/V_{100°C}$ = 2.353
Flash Point = 152°C (305°F)
Freezing Point = -33°C (-27°F)
Density @ 60°F(15.5°C) = 0.823

Heavy Suspension Fluid - 30W
Vis @ 100°C = 16.9 cSt
Vis @ 40°C = 69 cSt
VI = 262
$V_{40°C}/V_{100°C}$ = 4.097
Flash Point = 180°C (356°F)
Freezing Point = <-50°C (<-60°F)
Density @ 60°F(15.5°C) = 0.852

Red Line Suspension Fluids are truly remarkable in their resistance to thinning as temperature inceases. All fluids reduce viscosity with increasing temperature, but Red Line Suspension Fluids have the smallest change in viscosity with temperature in the industry. The easiest way to compare fluids is the ratio of the viscosity at 40°C divided by the viscosity at 100°C, or $V_{40°C}/V_{100°C}$. The smaller the number, the less the change in viscosity with temperature. You will find that Red Line Suspension Fluids have less than half the variation with temperature compared to many marketed products.

When choosing the proper fluid, use the fluid which provides a similar viscosity to your current fluid at operating temperature. The Red Line fluid will provide the expected damping over a wider range of temperatures. If developing a new shock, the ExtraLight (2.5W) has the lowest change with temperature and will provide the best performance over a temperature range, if the shock can be valved for that viscosity. There is no clear definition for the “W” which is used to identify most fluids, so matching viscosity at the operating temperature is the best way to select a fluid. If you need assistance with viscosities at different temperatures, contact Red Line and we can assist in choosing the right viscosity.

These products will provide very good shear stability which means that they should not degrade with use and will provide lower operating temperatures for the same viscosity when compared to conventional suspension fluids. They are also very low foaming, provide good seal lubricity and antiwear properties. They can be blended together in any proportion to achieve an intermediate viscosity.

The LightWeight is similar to what many manufacturers call “5W” and the Medium is similar to what manufacturers call “10W” and the Heavy is similar to what other manufacturers call “20W” or “30W”. The Medium and Heavy are most suitable for forks, and all can be used in shocks, depending on valving.

The change in density vs. temperature for the Red Line Suspension Fluids is approximately 0.00038/°F.