Technical Bulletin

Temperature Recommendations for EcoSafe®

Typical continuous running temperatures for EcoSafe® hydraulic fluids are 15 °C – 50 °C (60 °F – 120 °F).

Peak temperatures are determined by the temperature of onset of decomposition for EcoSafe® products. As determined by Thermal Gravimetric Analysis (TGA) for EcoSafe® products, the onset of decomposition temperature is 339 °C (642 °F) in an oxygen depleted atmosphere and 226 °C (439 °F) in the presence of air. The Flash Point is typically 274 °C (525 °F). The Fire Point is typically 304 °C (580 °F). The auto-ignition point is typically 380 °C (720 °F).

Intermittent peak temperatures of 121 °C (250 °F) can be obtained without any negative effects on the expected life of EcoSafe® hydraulic fluids.

The viscosity of the hydraulic fluid at the operating temperatures is very important in determining the ISO grade of hydraulic fluid used. The temperature operating range of EcoSafe® can be increased by taking into consideration the viscosity of the fluid at the desired operating temperature and cross-referencing it to the pump manufacturer's requirements for start-up viscosity.
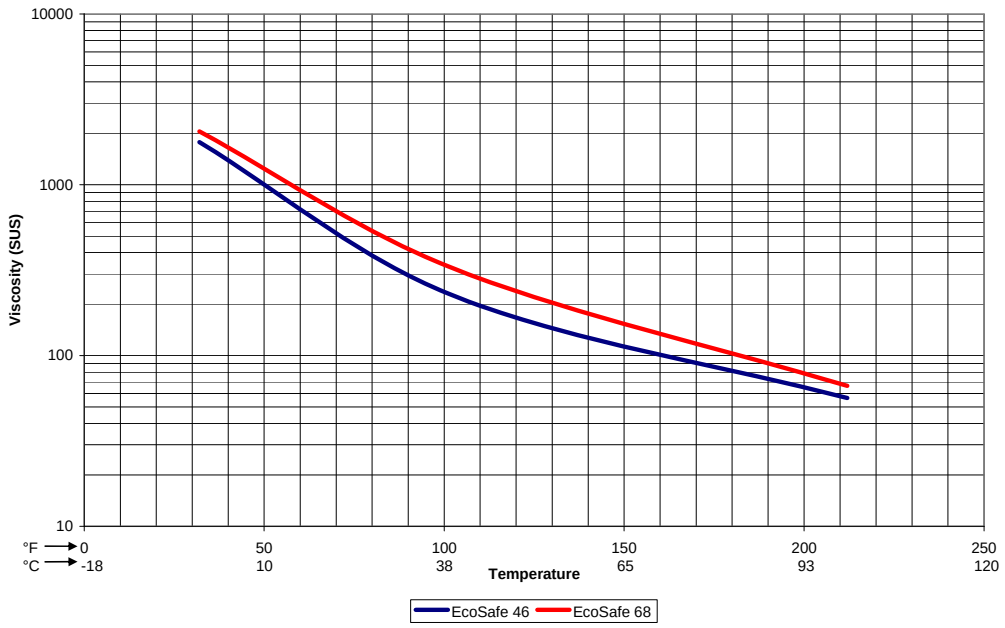
Figure 1 Viscosity-Temperature Chart