



Viscosity Performance and Specification Sheets

The single most important characteristic when selecting a lubricant is viscosity, which is defined as a measure of a fluid's resistance to flow. Lubricants that are too thick (too viscous) circulate slowly through a cold engine and can starve moving parts of needed lubrication. At operating temperatures, those same lubricants create drag and reduce efficiency. Lubricants that are too thin allow for easier cold starts but may also allow metal-to-metal contact, leading to catastrophic wear at operating temperatures.

Viscosity is highly dependent on temperature. Prior to the use of multi-viscosity oils, operators would switch oils based on the season of the year, using more viscous oils in the summer and less viscous oils in the winter. Today, viscosity modifiers minimize the effect of temperatures and allow operators to use the same lubricant all year long.

Viscosity measurements are listed on specification sheets, often quoting metrics from a cold-cranking simulator or mini-rotary viscometer test. Typical results on a specification sheet tell an operator how the oil performs in a "fresh oil" environment, prior to completing a drain interval. But a more accurate representation of an oil's performance is determined after the oil has "aged" inside an engine.

Laboratory tests demonstrate that even after 35,000 miles and in temperatures as low as -13°F , Suprex Gold® ESP continues to flow easily and quickly and will swiftly circulate throughout a cold engine. Our laboratory results were recently confirmed in the field during the Dave Marti Trucking million-mile engine overhaul. Evaluation of the camshaft, the furthest component from the oil sump, showed minimal wear even after a million miles. In fact, the camshaft was reported as "reusable" after completing the overhaul.

Premium base oil, viscosity modifier, and additive technology come together to make a long-lasting, high-performance lubricant that not only performs at the beginning of its duty cycle, but at the end, too. Competing oils often thin out as their viscosity modifiers break down or thicken up as their base oils oxidize under operating temperatures, subjecting moving parts to unnecessary wear. But Suprex Gold ESP lubricates optimally, day after day after day. Contact your FS Energy Specialist for more information.

To watch a short video of the Dave Marti Trucking million-mile teardown, go to YouTube and search for "FS Million Mile Overhaul."