Sulfurized hydrocarbon

elco 226

Application

Elco® 226 can be utilized in the formulation of metalworking fluids used for turning, tapping, threading, broaching and heading of ferrous metals. The treat rate will vary greatly depending on the severity of the operation and the material being worked.

Benefits

Elco 226 is a traditional active sulfur-containing additive synthesized from a mixture of hydrocarbon, ester and fatty oils. Elco 226 was designed to be employed in formulating extreme pressure lubricants suitable for use in metalworking processes where active sulfur and friction modifying properties are required.

- Excellent solubility in most base stocks
- Contains 8% active sulfur
- Excellent EP in difficult, ferrous applications

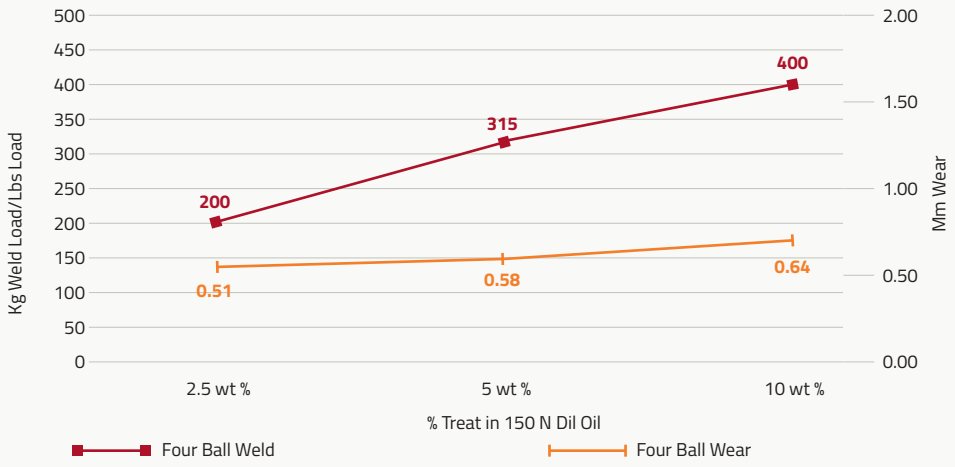
Characteristics

Physical	Test Method	Typical Values
Flash Point, °C	ASTM D92	160 min
Specific Gravity at 15.6°C	ASTM D1298	1.02 (8.50 lb/gal)
Viscosity at 40°C (cSt)	ASTM D7042	600
Viscosity at 100°C (cSt)	ASTM D7042	80
Chemical		
Total Sulfur (% wt.)	ASTM D4294	17
Active Sulfur (% wt.)	ASTM D1662	8.0

Recommended blending, storage and handling

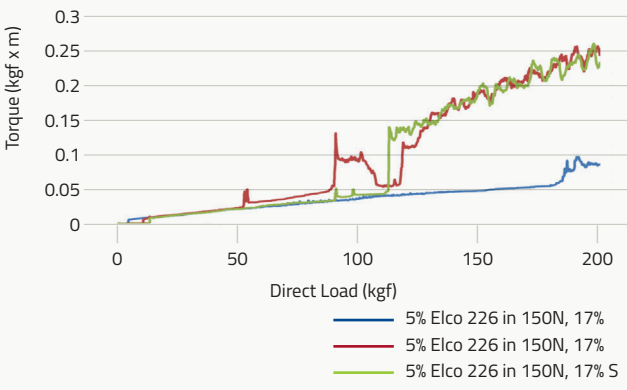
Elco 226 can be blended with mechanical or in-line blending equipment at temperatures not above 180°F (82°C) or below 75°F (24°C). The additive can be heated to 180°F (82°C) for unloading or transfer, but should not be stored for long periods at temperatures over 100°F (38°C).

Wear and EP Performance



A performance comparison: The Elco 4-Ball Ramp Test

The "Elco 4-Ball Ramp Test" is run using a standard 4-Ball Wear Test configuration. This proprietary test utilizes a computer-controlled 4-Ball test machine to increase the load at a specific rate until failure occurs as indicated by a rapid increase in torque. The results from this test correlate with machining efficiency and extended tool life. A higher load level at failure indicates improved tool life and increased operating efficiency. The graph below depicts a comparison of a fluid formulated with Elco 226 and two fluids blended with competitive sulfurized additives.



These results clearly demonstrate that the EP and anti-wear performance of a fluid depends on more than the sulfur content. Since the Elco 226 contains only 17% sulfur but has performance in this test superior to additives with twice the sulfur content, it is clear that other chemical properties have a major effect. These additional chemical properties of the additive are mainly determined by the details of molecular structure, substrate selection and process conditions.

For more information please scan the QR code to go directly to www.LubePerformanceAdditives.com

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