

## ENVIROLUBE® XE

### TCLP-SAFE NON-ASPHALTIC OPEN GEAR LUBRICANT

Whitmore's Envirolube® XE is a proven, robust open gear lubricant used primarily on Ball Mills and Kilns. It is free of heavy metals and asphalt. Instead of asphalt, Envirolube® XE contains a blend of high viscosity petroleum distillate, synthetic polymer and resins. The advantage over asphalt is that the spent lubricant does not harden over time. This greatly simplifies cleanup.

Envirolube® XE creates an effective layer of chemical and physical protection that prevents scuffing and pitting. The two opposing gears experience high load but are prevented from damaging each other. Instead, the pressure causes the high points to yield, and they are compressed. The result is radical improvement in surface smoothness. This process has been seen on both new and previously damaged gears. Smooth contacting surfaces are achieved without the use of a separate running-in product.

Ideally, Envirolube® XE should be sprayed intermittently onto the gears. This allows the product to partially dry on the gears, resulting in a more robust high-viscosity protective film. For large, heavily loaded Ball Mill gears a lubrication frequency of 15 to 20 minutes is normal.

**BENEFITS:**

- **WEAR PROTECTION, SURFACE SMOOTHING** - extends gear life and reduces operating expenses. The need for special running-in compounds is eliminated.
- **GEAR INSPECTION** - The brown coating is visible on the gear but is transparent enough to allow for gear inspection using a strobe light.
- **EASY CLEANUP** - The non-asphaltic base remains soft. It flows readily from the gear guard and is easily removed.
- **TCLP-Safe** - passes the EPA Toxicity Characteristic Leaching Procedure. The spent product is not considered a "characteristic hazardous waste".

**APPLICATIONS:**

Use on heavily loaded open gears such as Ball Mills and Kilns. Both grades meet the specifications of Falk and Metso Minerals. They also meet requirements of FL Smidth when used on intermittent spray systems. All grades are suitable for use in automatic lubrication systems using either drip tubes or spray nozzles. Also suitable for use in airless spray systems.

ASTM #	Grade name	TYPICAL CHARACTERISTICS	
		Medium	Heavy
D-445	Kinematic Viscosity, (base fluid) cSt @ 40°C cSt @ 100°C	>100,000 1,100	>100,000 1,100
D-445	Kinematic Viscosity (completed product) cSt @ 40°C	1,080	3,500 - 4,500
Gardner Method	Density, lb/gal @ 60°F (15.5°C) Specific Gravity, g/cc @ 60°F (15.5°C)	7.53 0.904	7.46 0.896
D-93	Flash Point, Pensky Martens, °F (°C)	-	245 (118)
D-92	Flash Point, Cleveland Open Cup, °F (°C)	295 (146)	345 (174)
D-2783	Four Ball EP Weld Point, kg	800	800
D-4172	Four Ball Wear (standard settings) Scar Width, mm	0.51	0.45
D-4048 Modified	Copper Strip Corrosion 212° (100°C) @ 3 hr	1B	1B
	Low Temperature Pumpability Lincoln Ventmeter @ 400 psi, °F (°C)	5 (-15)	20 (-7)
	FZG Test at settings A/2.76/50 Total specific mass loss after stage 12, mg/kWh	-	0.21

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

**PACKAGING**

Shuttle Tanks	Drums	Kegs	Pails
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