TECHNICAL DATA SHEET

ENVIROLUBE® TCLP-SAFE OPEN GEAR LUBRICANT

In almost every category of product, one brand stands out as the market leader in performance or quality. When it comes to protecting heavily loaded open gears, Whitmore's Envirolube[®] has been recognized by OEMs and end-users alike as that product.

No other open gear lubricant offers the protection from wear that is available from Envirolube[®]. The combination of a dense protective film, plus special chemical Extreme Pressure additives ensures smooth operation, even on gears that operate under the most severe load conditions.

By using Envirolube[®] on heavily loaded gears, existing wear damage such as pitting or spalling is smoothed, restoring a smooth operating surface. This process is called "Planishing".

Envirolube[®] creates an effective layer of chemical and physical protection that prevents scuffing and pitting. The opposing asperities experience extreme load, but are prevented from welding to each other. The pressure causes the high points to yield, and they are pushed down into the "valleys". The result is radical improvement in surface smoothness to both new and previously damaged gears. A separate running-in lubricant is unnecessary.

Ideally, Envirolube[®] 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 extends gear life and reduces operating expenses.
- SURFACE SMOOTHING Smoother surfaces spread the load and are more easily separated by a lubricating film. The need for special running-in compounds is eliminated.
- RUST PROTECTION protects against rust and corrosion.
- TCLP-Safe passes the EPA Toxicity Characteristic Leaching Procedure. The spent product is not considered a "characteristic hazardous waste".

APPLICATIONS:

Envirolube[®] meets or exceeds the requirements of major OEM's for open gear lubricants including Metso.

Use Medium grade on unheated mills in weather conditions between 0°F (-18°C) and 110°F (43°C). Use Heavy grade on heated mills up to 220°F (105°C) or where gears are badly worn.

All grades are suitable for use in airless spray systems. Do not use with NBR rubber seals. Viton $^{\otimes}$ is recommended.

ASTM #		TYPICAL CHARACTERISTICS		
		Envirolube [®] Light	Envirolube [®] Medium	Envirolube [®] Heavy
D-445	Kinematic Viscosity, (base fluid)			
	cSt @ 40°C	8000	77,000	>100,000
	cSt @ 100°C	200	659	1,263
D-445	Kinematic Viscosity (completed product)			
	cSt @ 40°C	125	820	2,034
	cSt @ 100°C	6		
Gardner	Density , lb/gal @ 60°F (15.5°C)	7.60	8.44	8.47
Method	Specific Gravity, g/cc @ 60°F (15.5°C)	0.910	1.013	1.017
D-2783	Four Ball EP			
	Weld Point, kg	400	800	800
D-4172	Four Ball Wear,			
	Scar Width, mm	0.63	0.55	0.55
	Coefficient of friction	Not tested	Not Tested	0.06045
	Lincoln Ventmeter @ 400 psi, °F (°C)	-55 (-48)	0 (-18)	15 (-9)
	FZG Stages Passed, DIN 51354	Not tested	12	12

*Extrapolated

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



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