

MULLEN CIRCLE BRAND

VORTEX *Heavy Duty Hydraulic Oil*

**Mullen
Circle Brand
Blended Products:**

*Cutting Oils
Circle Cut #729
Soluble Oils
Synthetic Coolants*

*Semi-Synthetic Coolants
Rust Preventives
Cleaners
Grease*

*Hydraulic Oil
Compressor Oil
Gear Oil
Way Oil*

*Spindle Oil
Machine Oil
Synthetic Oil*

Made In U.S.A.



Mullen Circle Brand, Inc.
3514 West Touhy Ave
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847/676-1880
Fax: 847/676-3748
Solutions@MullenOil.com



Hydraulic Oil For Severe Operating Environments

Vortex Hydraulic Oils are designed for more severe operating environments than typical antiwear hydraulic oils.

Vortex Hydraulic Oils possess a high viscosity index to minimize viscosity loss as temperatures increase as well minimize viscosity gain as temperatures decrease. This effectively increases the operational temperature range of the fluid.

Vortex Hydraulic Oils are fully formulated antiwear fluids, showing exceptional thermal and oxidative stability as well as low foam and exceptional corrosion control.

More ==>

...Providing Solutions To Industry Since 1912...



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VORTEX HYDRAULIC OILS

	#15	#22	#32	#46	#68	#100
ISO Grade	15	22	32	46	68	100
SAE Grade	N/A	5	10	20	20	30
Viscosity, SUS @ 100 F	82	110	160	240	353	520
Flash Point, F	252	400	400	400	400	400
Pounds/Gallon	7.01	7.1	7.1	7.29	7.43	7.56
Oxidation Stability, ASTM D-943						
Hours To 2.0 Tan						4000 Hours
Thermal Stability						
Viscosity Change, %						1.8
Steel Rod	Visual					1
	Deposit, mg					0.0
Copper Rod	Visual					3.8
	Deposit, mg					0.1
Demulsibility, ASTM D-1401						
Oil/Water/Emulsion (Minutes)						40/40/0 (10)
Steel Corrosion Test, ASTM D-665						
Distilled Water						No Rust
Synthetic Seawater						No Rust
Foam Tests, ASTM D-982, Seq I, II, III						
Foam, ml, 10 Minutes						None
Copper Corrosion, ASTM D-130						
						1a
Wear Test, Four Ball						
40 kg, 1800 rpm, 1 Hour, 130 F						.58 mm

...Providing Solutions To Industry Since 1912...

Cutting Fluids * Industrial Lubricants * Greases * Cleaners

The Information Given Herein Is Believed To Be Reliable, But No Guarantee Is Made Nor Liability Assumed.