



TECHNICAL DATA SHEET

DECATHLON™ HD SYNTHETIC ENCLOSED GEAR OILS

Decathlon™ Synthetic Enclosed Gear Oils are extreme pressure lubricants formulated to meet the exacting demands of most types of enclosed gear systems including differentials, transmissions and industrial gear boxes. The physical properties of the synthetic base stock reduces friction and power consumption when compared to petroleum based oils.

Decathlon™ Synthetic Enclosed Gear Oils are designed to perform under adverse conditions such as heavily loaded gears, shock loading, and frequent reversing action. They meet the performance requirements of extreme pressure lubricants of the American Gear Manufacturer's Association (AGMA) specification 9005-D94 "Lubrication of Industrial Enclosed Gearing." They also meet U.S. Steel Specification 224 requirements.

Decathlon™ Gear Oils are especially recommended for applications where temperatures exceed 175°F (80°C). Where high operating temperatures are caused by internal friction within the gearbox, the use of Decathlon™ Oils often results in temperature reductions.

BENEFITS:

- **REDUCED WEAR** - protects against scoring, scuffing and galling to increase gear and bearing life.
- **VERSATILE** - may be used in a variety of industrial and mobile equipment including mixed fleets.
- **DEMULSIFIABLE** - readily separates from water.
- **ANTIFOAM** - protects seals and keeps operating temperatures low by breaking up entrapped air bubbles as they form.

APPLICATIONS:

Use Decathlon™ HD on gearboxes that are subjected to severe or shock load.

It can also be used on gearboxes that are affected by a nearby heat source, such as in the glass or steel industry. Also, useful in cold conditions where conventional oils thicken excessively. In situations where oil change intervals are longer than normal the use of Decathlon™ HD Gear Oils minimizes carbon and sludge formation.

ASTM #		TYPICAL CHARACTERISTICS							
		HD 90	HD 140	HD 150	HD 220	HD 320	HD 460	HD 680	HD 1000
D-445	Product Name								
	ISO Grade	N/A	N/A	150	220	320	460	680	1000
	SAE Grade	75W-90	80W-140	90	90	90	140	140	250
	AGMA Grade	N/A	N/A	4 EP	5 EP	6 EP	7 EP	8 EP	8A EP
D-2161	Kinematic Viscosity								
	cSt @ 40°C	157	283	142	213	307	437	630	947
D-2270	cSt @ 100°C	17.8	31.9	17.3	23.2	30.2	37.4	49.6	66.2
	Saybolt Viscosity								
	SUS @ 100°F	727	1,470	686	988	1,352	2,159	3,002	4,606
D-97	SUS @ 210°F	89	156	88	114	134	186	229	322
	Viscosity Index	146	150	133	134	134	130	134	144
Gardner Method	Pour Point, °F (°C)	-40 (-40)	-30 (-34)	-60 (-51)	-45 (-43)	-40 (-40)	-35 (-37)	-30 (-34)	-20 (-28)
	Density, lg/gal @ 60°F (15.5°C)	7.22	7.44	7.28	7.29	7.37	7.35	7.43	7.41
D-92	Specific Gravity, g/cc @ 60°F (15.5°C)	0.867	0.893	0.874	0.87	0.884	0.882	0.892	0.889
	Flash Point, °F (°C) Cleveland Open Cup	425 (218)	450 (232)	440 (227)	450 (232)	450 (232)	460 (238)	470 (243)	450 (232)
D-2782	Timken OK Load, lb	65	75	65	65	65	65	65	65
D-4172	Four Ball EP								
	Weld Point, kg	250	315	250	250	250	250	250	400
D-665	Four Ball Wear								
	Scar Width, mm @ 40 kgf	0.35	0.35	0.30	0.30	0.30	0.30	0.30	0.30
D-130	Rust Test								
	Distilled Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
D-130	Copper Strip Corrosion								
	212°F (100°C) @ 3 hr	1A	1A	1A	1A	1A	1A	1A	1A

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

PACKAGING

Drums	Pails
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THE WHITMORE MANUFACTURING COMPANY

930 Whitmore Drive • P.O. Box 9300 • Rockwall, Texas 75087 • USA • (972) 771-1000 • Fax: (972) 722-2108

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