



# 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	<b>Product Name</b>								
	<b>ISO Grade</b>	N/A	N/A	150	220	320	460	680	1000
	<b>SAE Grade</b>	75W-90	80W-140	90	90	90	140	140	250
	<b>AGMA Grade</b>	N/A	N/A	4 EP	5 EP	6 EP	7 EP	8 EP	8A EP
D-2161	<b>Kinematic Viscosity</b>								
	cSt @ 40°C	124	260	147	212	288	465	648	993
D-2270	cSt @ 100°C	16	27	17	23	28	39	48	69
	<b>Saybolt Viscosity</b>								
	SUS @ 100°F	577	1,204	686	988	1,352	2,159	3,002	4,606
D-97	SUS @ 210°F	82	128	88	114	134	186	229	322
	<b>Viscosity Index</b>	146	144	140	146	139	139	137	144
Gardner Method	<b>Pour Point, °F (°C)</b>	-40 (-40)	-30 (-34)	-60 (-51)	-45 (-43)	-40 (-40)	-35 (-37)	-30 (-34)	-20 (-28)
	<b>Density, lg/gal @ 60°F (15.5°C)</b>	7.22	7.44	7.28	7.29	7.37	7.35	7.43	7.41
D-92	<b>Specific Gravity, g/cc @ 60°F (15.5°C)</b>	0.867	0.893	0.874	0.87	0.884	0.882	0.892	0.889
	<b>Flash Point, °F (°C)</b>	425	450	440	450	450	460	470	450
D-2782	Cleveland Open Cup	(218)	(232)	(227)	(232)	(232)	(238)	(243)	(232)
D-2783	<b>Timken OK Load, lb</b>	65	75	65	65	65	65	65	75
D-4172	<b>Four Ball EP</b>								
	Weld Point, kg	250	315	250	250	250	250	250	400
D-665	<b>Four Ball Wear</b>								
	Scar Width, mm @ 40 kgf	0.35	0.35	0.30	0.30	0.30	0.30	0.30	0.30
D-130	<b>Rust Test</b>								
	Distilled Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
D-130	<b>Copper Strip Corrosion</b>								
	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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