



Alpha CLP

Industrial Gear Oil Range

Description

The Castrol Alpha™ CLP range fulfils the requirements of DIN 51517-3 for CLP type gear oils and other key industrial specifications as listed below. The Alpha CLP range offer good wear protection, safety against scuffing, aging resistance and a high thermal endurance. In addition, the products behave neutral towards conventional seals and bearing metals.

Application

The Castrol Alpha CLP range offers good gear performance for most types of Industrial gears.

Alpha CLP is formulated to meet the requirements of the following key Industrial specifications:-

- AGMA 9005-F16 Antiscuff
- U.S. Steel 224
- DIN 51517 Part III
- MAG Cincinnati, Cincinnati Machine: P-63 (ISO 68), P-77 (ISO 150), P-74 (ISO 220), P-59 (ISO 320), P-35 (ISO 460)

Advantages

- Excellent thermal and oxidation stability providing minimal viscosity increase and a stable Sulfur/phosphorus package at high temperatures.
- Superior demulsibility separating water readily where water contamination is present.
- Good corrosion, rust and antifoam protection reducing catalytic effects of corrosion and wear on various system metals.
- Alpha CLP provides longer equipment life, efficient gear operations, reduced maintenance costs, longer lubricant life, and excels in applications demanding superior U.S. Steel 224 performance.

Typical Characteristics

Test	Method	Units	CLP 68	CLP 150	CLP 220	CLP 320	CLP 460
Appearance	Visual	-	Clear& Bright				
Density @ 15°C / 59°F [NEED]	DIN 51757 / ISO 12185 / ASTM D4052	g/ml	0.889	0.891	0.892	0.895	0.898
API Gravity @ 60°F/15.6°C	ASTM D1250		30.2	26.6	28.8	27.9	27.1
Kinematic Viscosity @40°C/104°F	(DIN EN) ISO 3104 / ASTM D445	mm ² /s	66	159	212	304	467
Kinematic Viscosity @100°C/212°F [NEED]	(DIN EN) ISO 3104 / ASTM D445	mm ² /s	8.4	14.5	18.8	24.4	30.5
Viscosity Index [NEED]	(DIN) ISO 2909 / ASTM D2270	-	92	96	93	91	91
Pour Point	(DIN) ISO 3016 / ASTM D5950	°C	-21	-24	-15	-15	-12
Flash Point - open cup method	(DIN EN) ISO 2592 / ASTM D92	°C	220	220	230	230	230
Rust test - synthetic seawater (24 hrs) [NEED]	(DIN) ISO 7120 / ASTM D665B	Rating	Pass	Pass	Pass	Pass	Pass
Copper corrosion (3 hrs @100°C/212°F)	(DIN EN) ISO 2160 / ASTM D130	Rating	1a	1	1	1	1
Water Separation @ 54°C / 129°F (40/37/3) [NEED]	(DIN) ISO 6614 / ASTM D1401	minutes	10	-	-	-	-
Water Separation @ 82°C / 180°F (40/37/3) [NEED]	(DIN) ISO 6614 / ASTM D1401	minutes	-	15	15	20	20
Foam Sequence I - tendency / stability [NEED]	ISO 6247 / ASTM D892	ml/ml	0/0	0/0	0/0	0/0	0/0
FZG Gear Scuffing Test A/8.3/90	(DIN) ISO 14635-1	Failure Load Stage	>14	>14	>14	>14	>14
Oxidation Stability - EP oils (95°C@312 hrs). Viscosity @100°C/212°F increase [NEED]	(DIN EN) ISO 4263-4 / ASTM D2893	%	-	-	4	4	4
Elastomer Compatibility, SRE-NBR 28/ SX [NEED]	(DIN) ISO 1817	Vol %	-	-	3.8	-	-
Brugger test [NEED]	DIN 51347	N/mm ²	-	-	46	-	-
Color	ASTM D1500		L2.5	L2.5	L2.5	L3.0	L3.5
Demulsibility at 30 mn	ASTM 1401		Pass	Pass	Pass	Pass	Pass
Four Ball EP Properties, Weld Point (Kg)	ASTM 2783	Kg Load	250	315	315	250	250
Four Ball Load Wear Index	ASTM 2783	Kgf	46.8	50.6	51.9	44.1	49.5

Subject to usual manufacturing tolerances.

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