



## Zinc Free Anti-Wear Hydraulic Oil

Dyna-Plex 21C® Zinc Free Anti-Wear (AW) Hydraulic Oils are premium, high performance, anti-wear oils designed for use in environmentally sensitive areas. They provide maximum pump life and trouble-free service. The rust and oxidation preventive capabilities, including superior demulsibility properties, make these oils rugged, even in high-output systems. These oils also feature excellent vane pump and piston pump performance, anti-foam characteristics and superior hydrolytic stability. Dyna-Plex 21C Zinc Free AW Hydraulic Oil's ability to control formation of contaminants helps prevent filter blockage. In addition to having excellent performance, these oils also exhibit inherently biodegradability characteristics.

Dyna-Plex 21C Zinc Free AW Hydraulic Oils resist deterioration and perform at superior levels, even at high operating temperatures, pressures and speeds and low pour point ensures easy system start-up in cold conditions.

<u>PROPERTY</u>	<u>ASTM TEST METHOD</u>	<u>ISO 32</u>	<u>ISO 46</u>	<u>ISO 68</u>	<u>MULTI-VIS 32</u>	<u>MULTI-VIS 46</u>
Viscosity @ 40°C, cSt	D-445	31.20	46.07	68.10	32.00	47.00
Viscosity @ 100°C, cSt	D-445	5.25	7.00	8.80	6.40	7.80
Viscosity Index	D-2270	115	115	110	160	135
Flash Point, COC, °C	D-92	210	216	220	210	210
Flash Point, COC, °F	D-92	410	420	428	410	410
Pour Point, °C	D-97	-39	-36	-36	-51	-40
Pour Point, °F	D-97	-38	-33	-33	-60	-40
Color	D-1500	1.0	1.0	1.5	1.0	1.0
Gravity, °API	D-287	31.5	30.5	29.5	33.5	31.5
Turbine Oil Oxidation	D-943	10000+	10000+	10000+	10000+	10000+
Copper Strip	D-130	1b	1b	1b	1b	1b
Rust Test	D-665	Pass	Pass	Pass	Pass	Pass
Vane Pump, mgs wt loss	D-2882	12	12	12	12	12
Dielectric Strength, kv		35	35	35	35	35
FZG Load Stages						
Pass Stage	D-5182	11	12	N/A	11	12
Four Ball Wear	D-2266	0.52	0.46	0.34	0.52	0.46
Biodegradability, %	D-5864	28.2	28.0	28.0		

Meets or exceeds the following tests and requirements:

- FZG LS 11/12
- AFNOR – NFE 48-690, NFE 48-691
- Cincinnati Machine – P-68, P-69, P-70
- Denison – HF-0, HF-1, HF-2
- DIN 51524, Part I, Part II
- General Motors – LS-2
- Vickers – I-286-S, M-2950-S, 35VQ25
- Bosch Rexroth – RE 90 220
- ISO 11158 – Categories HH, HL, HM and HR
- Hitachi – EXO 46 (MF46)
- Inherently Biodegradable