



Product Bulletin

DIELECTRIC BLUE, AMBER & GOLD HVI R&O AW HYDRAULIC OILS

BRAD PENN[®] Dielectric Blue, Amber & Gold HVI R&O AW Hydraulic Oils are premium quality, high viscosity index, antiwear hydraulic oils with high dielectric strength (30 kV) for use in electrical service equipment, such as cherry pickers. These products are designed for use in mobile hydraulic systems operating in environments subject to wide variations in ambient temperatures.

BRAD PENN[®] Dielectric Blue, Amber & Gold HVI R&O AW Hydraulic Oils are formulated to have both a high viscosity index as well as a low pour point for use over a wider temperature range than conventional antiwear hydraulic oils. These multi-viscosity lubricants offer the same outstanding wear, foam, and rust and oxidation protection as the BRAD PENN[®] Premium R&O AW Hydraulic Oils, yet also offer superior flow properties and pumpability when used in mobile equipment operating in environments exposed to extreme temperature swings. Their highly effective zinc dithiophosphate additive system provides excellent wear protection – ensuring long life for hydraulic pumps and motors.

BRAD PENN[®] Dielectric Blue, Amber & Gold HVI R&O AW Hydraulic Oils are recommended for applications where a premium quality antiwear hydraulic oil is required. The additive system satisfies the requirements for both high pressure industrial and mobile Hydraulic systems which call for: Sundstrand, Vickers, and Racine, Denison HF-0 (Dielectric Amber, Gold), HF-1, and HF-2 (Dielectric Blue, Gold), Cincinnati Machine P-68 (Dielectric Amber), P-70 (Dielectric Gold), as well as Vickers M-2950-S and I-286-S. Additionally, they are recommended for the following applications:

- Hydraulic elevators, hoists, and lifts
- Mobile, industrial, and marine hydraulic systems operating in cold weather or in locations subject to wide temperature fluctuations
- Electrical service equipment (cherry pickers), mobile construction equipment, and hydraulic control systems for machine tools and presses.



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BRAD PENN[®]
Dielectric Blue, Amber and Gold HVI R&O AW Hydraulic Oils –
Typical Properties

Dielectric Hydraulic Oils		Blue	Amber	Gold
ISO Viscosity Grade	Test Method	15	32	46
API Gravity, 60°F	ASTM D-1298	35.6	32.1	31.6
Density, lbs/gal (g/L)	Calculated	7.05 (845)	7.20 (863)	7.22 (865)
Viscosity, cSt @ 40°C	ASTM D-445	15.0	32.0	46.0
Viscosity, cSt @ 100°C	ASTM D-445	3.9	6.5	8.4
Viscosity, SUS @ 100°F	ASTM D-2161	82	163.0	234
Viscosity, SUS @ 210°F	ASTM D-2161	39	48.0	54
Viscosity Index	ASTM D-2270	165	158	160
Brookfield Viscosity, cP @ -40°C (max)	ASTM D-2983	3,500	35,000 (min)	100,000
Pour Point, °F (°C)	ASTM D-5949	-70 (-57)	-43.6 (-42) (max)	-45 (-42)
Flash Point, COC, °F (°C)	ASTM D-92	325 (162)	400 (204)	390 (198)
Color	ASTM D-1500	Blue	1.0	1.0
Dielectric Strength ¹ , kV (min)	ASTM D-877	30	30	30
Product Code		7357	7390	7374

¹ Packaged product only. The dielectric strength will decrease if the oil becomes contaminated with dirt or water.