



Product Bulletin

GULF HARMONY HVI R&O AW HYDRAULIC OILS

Gulf Harmony HVI R&O AW Hydraulic Oils are premium quality high viscosity index (HVI) anti-wear (AW) 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.

FEATURES AND BENEFITS:

Gulf Harmony 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 anti-wear hydraulic oils. These multi-viscosity lubricants offer the same outstanding wear, foam, and rust and oxidation protection as the Harmony 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 anti-wear additive system provides excellent wear protection, assuring long life for hydraulic pumps and motors.

APPLICATIONS:

Gulf Harmony HVI R&O AW Hydraulic Oils are recommended for applications where premium quality anti-wear hydraulic oils are required. The additive system satisfies the requirements for both high and low pressure industrial and mobile hydraulic systems that call for: Sundstrand, Vickers, and Racine, Denison HF-0 (ISO VG 46), HF-1, and HF-2, Cincinnati Machine P-70 (ISO VG 46), as well as Vickers M-2950-S and I-286-S. Additionally they are recommended for the following applications:

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

SELECTION:

Gulf Harmony HVI R&O AW Hydraulic Oils are available in two viscosity grades (VG), **VG 26** and **ISO VG 46**. Follow equipment manufacturers' recommendations for appropriate viscosity grade.



AMERICAN REFINING GROUP, INC.

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AVAILABILITY:

Gulf Harmony HVI R&O AW Hydraulic Oils are available throughout Gulf's marketing area. Your Gulf representative or Gulf jobber can provide specific information. Need additional information? Call Gulf @ 1-800-566-GULF (4853).

Gulf Harmony HVI R&O AW Hydraulic Oils – Typical Properties

ISO Viscosity Grade		26¹	46
Product Code	Test Method	334242	334244
Viscosity, cSt @ 40°C	ASTM D-445	26	46
Viscosity, cSt @ 100°C	ASTM D-445	5.3	8.4
Viscosity, SUS @ 100°F	ASTM D-2161	134	234
Viscosity, SUS @ 210°F	ASTM D-2161	44	54
Brookfield Viscosity, cP @ -40°C (max)	ASTM D-2983	60,000	100,000
Viscosity Index	ASTM D-2270	143	160
Color	ASTM D-1500	0.5	1.0
Pour Point, °F (°C)	ASTM D-97	-50 (-45)	-45 (-42)
Flash Point, COC, °F (°C)	ASTM D-92	380 (192)	390 (198)
Dielectric Strength ² , kV (min)	ASMT D-877	30	30
API Gravity, 60°F	ASTM D-1298	33.2	31.6
Density, lbs/gal (g/L)	Calculated	7.15 (857)	7.22 (865)

¹ 26 is not an ISO viscosity grade.

² Packaged product only. The dielectric strength will decrease if the oil becomes contaminated with dirt or water.