Product Data Sheet

NATIONAL | Multi-viscosity Hydraulic Oils

Product Description

National Multi-viscosity Hydraulic are premium-quality anti-wear hydraulic oils with outstanding cold temperature flow properties. They are formulated with an effective anti-wear additive package with enhanced EP performance and an outstanding shear stable polymer which helps reduce wear in high-speed, high-pressure vane/ gear pumps.

National Multi-viscosity Hydraulic Oils are recommended for hydraulic and fluid power transmission systems that are subjected to wide temperature variations and provides good pumpability at low temperatures. These oils are compatible with most seal materials and paints normally specified for use with mineral oils and work great in systems that require dielectric hydraulic oil.

Features

- ✓ Excellent water separation (demulsibility) that facilitates water removal
- ✓ Very low viscosity variation and quick start ups thanks to the latest polymer technology that provides excellent low-temperature perfor-mance, and maintains precision of machinery when either hot, cold, or under high loads
- ✓ High shear stability, our VI improver is highly resistant to mechanical stress, the “stay-in-grade” characteristics ensure effective lubrication and long oil life
- ✓ Reduce wear and corrosion, strong hydrolytic stability and wear protection reduce the negative impact of unavoidable water condensation in your machinery after shutdown
- ✓ Reduce oil consumption and improve equipment protection through outstanding shear and oxidation stability
- ✓ Excellent filterability minimizes the tendency to cause filter blockage
- ✓ Fast air release and antifoam properties minimize pump cavitation in systems with high circulation rates

Industry and OEM Applications [2]

- ♦ Parker HF-0 (formerly Denison; HF-1 & HF-2 are included under this designation)
- ♦ Eaton Vickers E-FDGN-TB002-E
- ♦ Bosch Rexroth RDE 90235
- ♦ FIVES P-68, P-69, P-70 (obsolete)
- ♦ DIN 51524-3
- ♦ ISO 11158
- ♦ ASTM D6158
- ♦ SAE MS 1004
- ♦ JCMAS P041 HK
- ♦ GM LS-2
- ♦ AIST 126, 127
- ♦ SEB 18122

Technical Data

ISO GRADE		15	22	32	46	68
Product Number		07-122645	07-122642	07-122650	07-122646	07-122648
SDS Number		S020	S020	S021	S021	S021
Viscosity @ 40°C, cSt	D445	15.27	23.86	33.09	46.74	65.53
Viscosity @ 100°C, cSt	D445	3.93	5.35	6.30	7.99	10.71
Viscosity Index	D2770	162	169	144	143	154
Specific Gravity @ 60°F	D4052	0.8439	0.8460	0.8605	0.8675	0.8714
Pour Point, °C	D5950	-54	-54	-51	-51	-51
Color ASTM	D1500	L0.5	L0.5	L0.5	L0.5	L0.5
Demulsibility	D1401	38-39-3, (15 min)	40-37-3, (10 min)	40-38-2, (20 min)	40-39-1, (5 min)	42-38-0, (10 min)
Foam characteristics	D892	PASS	PASS	PASS	PASS	PASS
Total Acid Number, mg KOH/g	D664	0.588	0.590	0.411	0.437	0.436
Breakdown voltage, kV 2	D877	47	38	49	42	40

1) *Consult your owner's manual regarding its suitability for use in equipment from other OEMs. These hydraulics perform in most equipment without concern for fluid-related harm.*
2) *Breakdown Voltage (Dielectric strength) values were measured at point of origin, and they will decrease if the oil becomes contaminated with dirt or even a very small amount of water. According to the Megger guide to insulating oil dielectric breakdown testing, a breakdown voltage of 30 kV or more is usually considered to be acceptable.*

The recommended shelf life for these oils is typically 48 months from manufacturing date when stored properly in the original sealed containers.