



# INDUSTRIAL HYDRAULIC



## DESCRIPTION

HYDRAULIC series consists of highly refined mineral base oils and special additives meeting the international classification 6743-4 (ISO-L-HM) and offering a wide selection of viscosities. The lubricants are enhanced by special additive treatment to minimize corrosion, oxidation, foaming and machinery wear. Due to their extreme pressure (EP) additives, they are suitable for applications such as in lightly loaded gears, in some variable speed units and bearings. They meet all modern hydraulic systems' filtration requirements (down to 6 micron filters).

## APPLICATIONS

The series is suitable for use in industrial and marine hydraulic systems fitted with vane, gear axial and pistons pumps, especially those operating under high pressures and with increased wear protection requirements. They can also be used in lifts, presses, coal mining machinery and various machine components. They comply with pump constructors' requirements for all the metallurgical materials (excl. silver-plated ones, which require a zinc-free hydraulic lubricant).

## CHARACTERISTICS-BENEFITS

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Inhibits rust and oxidation.	Protection of metallic surfaces against corrosion and rust.
Superior thermal stability. Exceptional anti-wear protection.	Prevents the creation of sticky sludge than reduces pump life and interferes with the operation of critical components.
Foam formation resistance and quick air release. Very good water separation properties.	Trouble-free operation. Increase of system efficiency.
Fully compatible with common seal materials; Nitrile, Buna-N, Viton, Silicone.	Safety in use. Long service life.
Very good filterability.	Prevents filter blockage. Application in advanced hydraulic systems.

## PHYSICAL-CHEMICAL CHARACTERISTICS

HYDRAULIC	METHOD	ISO 22	ISO 32	ISO 46	ISO 68	ISO 100	ISO 150
Density at 15°C, g/cm <sup>3</sup>	ASTM D1298	0,864	0,8605	0,8690	0,8825	0,8860	0,8890
Viscosity, Kinematic (cSt) 40°C	ASTM D445	22	32	46	68	100	150
Viscosity, Kinematic (cSt) 100°C	ASTM D445	4,42	5,4	6,7	8,7	11,1	14,6
Viscosity index	ASTM D2270	103	102	98	98	96	95
Flash point, COC, °C	ASTM D92	214	210	230	240	256	260
Pour point, °C	ASTM D97	-30	-30	-30	-24	-21	-18
Demulsibility, min.	ASTM D1401	5	10	10	20	20	20
Copper corrosion	ASTM D130	1a	1a	1a	1a	1a	1a

The above mentioned characteristics represent mean values.

## SPECIFICATIONS

DIN 51524 Part 2 HLP; Parker (Denison) HF-0, HF-2, HF-1; AFNOR NFE 48-603 HM; Vickers M-2950-S, I-286-S; Eaton 35VQ25; Fives (Cincinnati Milacron) P68 (ISO 32), P69 (ISO 68), P70 (ISO 46); ISO 11158 HM (CETOP RP 91 H); ISO 6743-4 (ISO-L-HM); Bosch Rexroth RE 90220; SAE MS 1004 (HM); JCMAS P041 HK; ANSI (AGMA) 9005-E02-RO; GM LS-2; AIST (U.S. Steel) 126, 127; SEB 181222