



MAKER TELEX HVLP

Description

The base oils used to manufacture this group of products have been carefully refined to obtain a high viscosity index and excellent resistance to oxidation. Its constituent additives, as well as enhancing these natural characteristics, provide this lubricant with exceptional anti-wear properties and temperature performance.

These oils are specially designed for hydraulic circuits subjected to sudden temperature changes in which oils are also required to have greater anti-wear properties. They are specifically suited to hydraulic circuits exposed to the elements or with low working temperatures, as well as equipment requiring viscosity variations that are significantly lower than in standard fluids, and hydraulic systems used at sea (watertight doors, capstans and windlasses, stabilisers, etc.). Excellent performance in hydraulic systems for all kinds of public works machinery.

Properties

- High resistance to oxidation, ageing and sludge formation.
- Excellent water separation.
- Outstanding anti-wear properties.
- Very good anti-foaming qualities.
- Very high viscosity index.
- Effective protection of metals against corrosion.
- Compatible with the joints habitually used in hydraulic circuits.
- Great load-bearing capacity.

Quality levels, approvals and recommendations

- IBERCISA* (ISO 32, ISO 46)
- MANULI* (ISO 46)
- AFNOR: NF ISO 11158 HV, 48-690, 48-691 (ISO 15, ISO 22, ISO 32, ISO 46, ISO 68)
- FIVES CINCINNATI: P-68 (ISO 32)
- FIVES CINCINNATI: P-70 (ISO 46)
- IMS DELTA MATIC* (ISO 32, ISO 46, ISO 68)
- THYSSENKRUPP: HVLP* (ISO 32, ISO 46, ISO 68)
- DIN: 51524-HVLP (ISO 15, ISO 22, ISO 32, ISO 46, ISO 68)
- FIVES CINCINNATI: P-69 (ISO 68)
- ISO: 6743/4 HV, 11158 HV (ISO 15, ISO 22, ISO 32, ISO 46, ISO 68)

*Formal approval



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Technical specifications

	UNIT	METHOD	VALUE				
ISO Viscosity Grade			15	22	32	46	68
Viscosity at 100 °C	cSt	ASTM D445	3.7	4.8	6.1	7.9	10.4
Viscosity at 40 °C	cSt	ASTM D445	15	22	32	46	68
Viscosity index	-	ASTM D2270	145	147	141	143	143
Density at 15 °C	g/cm3	ASTM D4052	0.862	0.859	0.872	0.876	0.881
Flash point, open cup	°C	ASTM D92	180	198	220	226	242
Pour point	°C	ASTM D97	-45	-39	-33	-33	-33
Water separability at 54 °C	min	ASTM D1401	<25	<25	<25	<30	<45
Resistance to rust, A and B	-	ASTM D665	Pass	Pass	Pass	Pass	Pass
Air release at 50 °C	min	ASTM D3427	<1	<2	<2	<4	<5
Corrosion Cu, 3hrs 100 °C	-	ASTM D130	1b	1b	1b	1b	1b
TAN	mg KOH/g	ASTM D664	0.5	0.5	0.38	0.38	0.38
No. Neutralisation at 2.000 h	mg KOH/g	ASTM D943	<2	<2	<2	<2	<2
FZG, damage stage	-	DIN 51354	11	11	12	12	12

The above mentioned characteristics are typical values and should not be considered product specifications.