

HO PREMIUM 15 / 22

HEES ISO VG 15/ HEES ISO VG 22

Description

PREMIUM Hydraulic oils are the first class fully synthetic hydraulic oils from saturated esters. They provide excellent high pressure and temperatures properties, multiple extendibility of change intervals and they are neutral to all kinds of sealings. They have a great cold-exposure characteristics.

Areas of Application

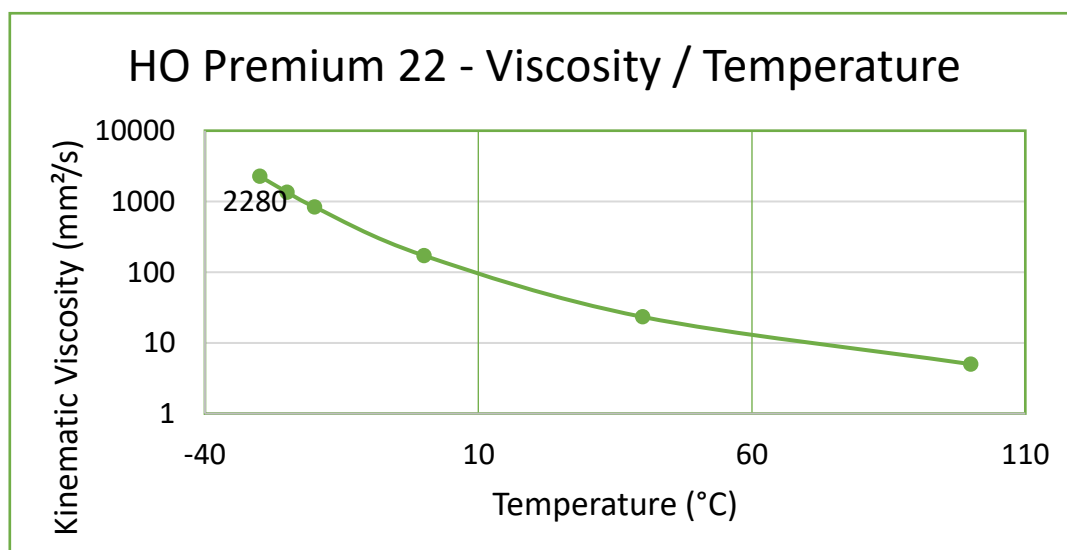
PREMIUM Hydraulic oils are designed to meet the highest hydraulic requirements. They are suitable when incidental spillages in environmentally sensitive areas can occur (agriculture, water power plants, forestry, public works, off-shores and other areas).

Characteristic features:

- Great lubrication performances
- Perfect anti-wear properties
- Great cold-exposure properties
- Excellent thermooxidation stability
- Easily biodegradable according to OECD 301 B and OECD 301 D
- EU Ecolabel certificate (No. CZ/027/001)
- Good compatibility with sealing materials, paints and hoses
- Great protection against rust and corrosion
- With non-foaming additives



Improved low temperature viscosity of all HO Premium fluids (below HO Premium 22)



Characteristics of HO PREMIUM	Method	UNIT	ISO VG 15	ISO VG 22
Viscosity 40°C	ASTM D445	mm ² /s	15	22
Viscosity 100°C	ASTM D445	mm ² /s	3,88	5,05
VI	ASTM D 2270		160	165
Density (20 °C)	ASTM D 4052	g/cm ³	0,917	0,908
Flash point COC	ASTM D92	°C	>230	>240
Pour point	ASTM D97	°C	<-70	<-65
Total Acid Number (TAN)	ASTM D 664 ASTM D 974	mg KOH/g	≤ 0,1	≤ 0,1
Hydroxil value	AOCS Cd 13-60	mg KOH/g	≤ 3	≤ 4
Iodine value	DGF C - V 11 B	gl2/100g	≤ 1	≤ 1
Water content	ASTM D 4928	%	≤ 0,01	≤ 0,01
Foam Seq. 1/2/3	ASTM D 892	ml/ml	0/0/0	0/0/0
Air release 50°C	ASTM D 3427	min	0,5	0,5
Copper corrosion (3h/100°C; 24h/100°C)	ASTM D 130	rating	1a	1a
Steel corrosion Procedure A (distilled water); B (synthetic sea water)	ASTM D 665	rating	pass; pass	pass; pass
AW - Four Ball Tests (1500 rpm/1h/300N)	ASTM D 4172	mm	>0,35	>0,35
FZG Gear Test A 8.3/90 (visual) - damage load stage	DIN 51354, part 2)	rating	11	11
RVPOT (150°C , H₂O, O₂, Cu Catalyst) - life time	ASTM D 2272	min	1419	1396

The above-listed data represent average values. They are intended as a guide to facilitate handling and cannot be regarded as specified data.

Seal Compatibility of HO PREMIUM 22

Seal Compatibility (ISO 6072) 100°C / 168h	NBR 1	HNBR	FKM2	AU
<i>Change of Shore A hardness (Shore A)</i>	-10	-8	-2	0
<i>Change of tensile strength (%)</i>	-15	-5,9	-17,6	-21,9
<i>Change of elongation at break (%)</i>	-16,9	-6,6	8	3,8
<i>Change of volume (%)</i>	14,9	14,9	1,2	-0,6