PRODUCT DATA SHEET

AGIP OSO

AGIP OSO is the trademark of a line of high quality hydraulic oils specially developed for use in all types of hydraulic systems and equipments.
The oils are formulated from selected paraffinic base stocks treated with "low zinc" technology for a very high thermal, oxidative and hydrolytic stability.
The oils are available in a wide range of viscosities to suit all practical requirements. (OSO 15 and 22 Classification ISO-L-FD; OSO 22-150 Classification ISO-L-HM)

CHARACTERISTICS (TYPICAL FIGURES)

OSO		15	22	32	37*	46
Viscosity at 100°C	mm²/s	3.3	4.2	5.3	6.1	6.8
Viscosity at 40°C	mm²/s	14.3	21.5	30	37	45
Viscosity Index	-	98	98	100	100	100
Flash Point COC	°C	190	195	205	210	212
Pour Point	°C	-30	-30	-30	-27	-27
Mass density at 15°C	kg/l	0.860	0.865	0.875	0.878	0.880
(*) no ISO VG grade						

OSO		68	100	150	220	320
Viscosity at 100°C	mm²/s	8.67	11.1	14.7	18.9	24
Viscosity at 40°C	mm²/s	68	100	150	220	320
Viscosity Index	-	98	96	96	96	95
Flash Point COC	°C	220	228	238	265	270
Pour Point	°C	-24	-24	-24	-21	-18
Mass density at 15°C	kg/l	0.885	0.890	0.895	0.897	0.900

PROPERTIES AND PERFORMANCE

- The oils are designed for energy transmission in plants requiring the use of a hydraulic fluid. The oils also provide adequate lubrication by creating a strong lubricant film which withstands high loads between the sliding parts of high-pressure hydraulic systems.
- AGIP OSO oils have very good antiwear properties, as illustrated by typical test results:
  * vane and ring wear in the Vickers test around 35 mg;
  * the higher grades (OSO 46-150) passes the 12th stage of the FZG test, while,
- the lowerest grades passes the 11th.
- They have extremely good oxidation resistance and stability even when subjected to unusually high thermal stresses; this property minimizes sludge and deposit formation, thus preventing blocking of

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ports, valves and controls, while guaranteeing that the oil remains properly fluid. Maintenance costs are therefore reduced and the useful service life of the oil is extended.

- The high Viscosity Index of all grades minimizes changes in viscosity throughout the normal range of operating temperatures, thus ensuring constant flow, low friction loss and good hydraulic efficiency, while protecting against the possibility of cavitation.
- They have a low pour point which allows easy start-up of hydraulic equipment even at low temperatures, without circulation or regulation problems.
- Their outstanding anticorrosion and antirust properties inhibit the oxidation of internal surfaces of hydraulic circuits and therefore prevent operating difficulties and breakdown of the oil caused by metallic oxides that would otherwise form within the machinery.
- Their good demulsibiliy prevents the formation of a stable emulsion between the oil and any water which enters the system through leakage or condensation. The fluids therefore maintain their lubricating power and anticorrosion performance even under these circumstances.
- Their antifoam properties and their ready release of entrained air prevent difficulties with pumps and controls which can cause irregularities in performance and other problems arising from the compressibility of air bubbles.
- They show a very high filtrability; they are suitable for very fine filters (3 micron up to ISO VG 68)

APPLICATIONS

AGIP OSO fluids are recommended for use in all hydrodynamic power transmission machinery, in hydraulic controls and hydrostatic systems widely used in all fields of technology, such as transport, construction and mining, as well as in chemical and metallurgical machinery, machine tools, marine and aviation equipment etc..
Due to the great influence of viscosity on the efficiency of hydraulic machinery, the grade chosen should be that recommended by the system designer. Purely as an indication, the lighter grades are generally used in high-speed machinery and in precision equipment, while the heavier grades are used in low-speed machinery with high hydrostatic pressures.
AGIP OSO products are recommended not only for use as hydraulic fluids but also as heavy-duty lubricants for bearings, reduction units, etc., where operating conditions call for special antiwear characteristics.
They can be adopted, too, where savings can be made by using a reduced number of grades throughout a plant.

SPECIFICATIONS

AGIP OSO products meet the requirements of the following specifications:

- ISO L-FD (OSO 15 e 22)
- ISO L-HM (OSO 22-150)
- ISO 11158
- AFNOR NF E 48603 HM
- AISE 127
- BS 4231 HSD
- CETOP RP 91 H HM

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- EATON VICKERS I-286-S3
- DIN 51524-2 HLP (edition 2006)
- LAMB LANDIS - CINCINNATI P 68, P 69 e P 70 - level
- PARKER HANNIFIN (DENISON) HF-0 – level
- SAUER-DANFOSS 520L0463 Rev. F

AGIP OSO products are approved by the following manufacturers:

- ATOS Tab. P 002-0/I
- Danieli Standard 0.000.001 Rev. 14 (A01.3.1a - Type 10 AGIP OSO 46; A01.3.1b - Type11 AGIP OSO 68)
- HORBIGER HYDRAULIC
- LINDE

REXROTH RE 90220-1/11.02