



Bartran HV

Multigrade Hydraulic Oil

Description; Description

A range of premium quality multigrade mineral oil-based hydraulic fluids of high Viscosity Index (VI) and containing zinc-free anti-wear additives. Bartran HV oils display high performance characteristics with outstanding ultra fine

filterability. The selection of shear stable VI-improvers ensures that the viscosity is maintained at design levels in service.

Applications; Applications

Bartran HV oils are intended for severely stressed hydraulic systems requiring a high level of anti-wear performance or ultra fine filtration in two main types of duty

+ Outdoor plant operating in very wide temperature variations - such as machinery subjected to cold start-up conditions and high-temperature continuous running.

+ Indoor manufacturing equipment that incorporates control systems requiring a hydraulic fluid whose viscosity change with temperature is minimal, such as precision machine tools and copying machines.

Bartran HV are fully compatible with elastomer materials commonly used for static and dynamic seals e.g.

. Fluorinated (VITON*/TEFLON*) . Polyester (HYTREL*)

. Perfluorinated (KABREZ*) . Polyurethane (ADIPRENE*)

. Nitril butyl (PERBUNAN* or BUNA N*) * trade marks

The Bartran HV oils meet specification requirements of all the major manufacturers of hydraulic pumps and

motors, and the following approvals/recommendations apply :

- DIN 51 524, Part 3
- ISO 6743/4 (NFE 48-603 and NFE 60-203),

Category
HV

- Vickers mobile machinery, exceeds M-2952-S specification (pump 35V.Q.25)
- Rexnord-Racine vane pumps
- Mannesmann Rexroth Hydromatik piston pumps
- Sigma-Rexroth gear pumps
- Ford M-6 C 32 . Sauer . Marrel Hydro
- Frank Mohn (France), marine cargo-handling systems

Follow the recommendations of equipment manufacturers regarding filtration and oil change intervals.

Bartran HV oils are suitable for a wide range of other applications e.g. certain machinery bearings and gears, thus providing scope for rationalisation.

Main Benefits; Main Benefits

- Wide operating temperature range
- Easy cold start-up
- Highest degree of equipment protection
- Superior ultra fine filterability even in wet conditions

- Extended oil life and improved tolerance of severe service conditions
- Leading performance in anti-wear protection, oxidation resistance and thermal stability

Storage; Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration

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of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.; of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

Health, Safety and Environment; Health, Safety and Environment

Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.; Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.

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Typical Characteristics; Typical Characteristics

| | Test Methods; Test Methods | Units; Units | Grade :; Grade : | | | | | |
|--|----------------------------|--------------------|------------------|------|------|------|------|------|
| | | | 15 | 22 | 32 | 46 | 68 | 100 |
| Density at 15 °C | ISO 3675, ASTM D1298 | kg/m ³ | 874 | 872 | 875 | 882 | 885 | 890 |
| Flash Point (COC) | ISO 2592, ASTM D92 | °C | 160 | 178 | 200 | 204 | 208 | 218 |
| Viscosity KV @ 40 °C | ISO 3104, ASTM D445 | mm ² /s | 15 | 22 | 33 | 46 | 70 | 100 |
| 100 °C | | | 3.8 | 5.0 | 6.3 | 8.2 | 10.8 | 13.4 |
| -20 °C | | | - | - | 1675 | 3050 | - | - |
| -30 °C | | | 1130 | 3100 | 8920 | - | - | - |
| Viscosity Index | ISO 2909, ASTM D2270 | | 152 | 155 | 153 | 152 | 142 | 133 |
| Pour Point | ISO 3016, ASTM D97 | °C | -51 | -42 | -39 | -36 | -39 | -33 |
| Foam Tendency/Stability : | ASTM D892, IP 146 | | | | | | | |
| Sequence I : 24 °C | | ml | 15/0 | 15/0 | 70/0 | 5/0 | 5/0 | 5/0 |
| Sequence II : 93 °C | | ml | 50/0 | 60/0 | 35/0 | 20/0 | 30/0 | 5/0 |
| Sequence III : 24 °C after Sequence II | | ml | 5/0 | 15/0 | 5/0 | 5/0 | 5/0 | 5/0 |
| Air Release | ASTM D3427, IP 313 | min | 2.9 | 3.3 | 5.7 | 3.4 | 2.4 | 4.7 |
| Time to 0.2 % at 50 °C | | | | | | | | |
| Demulsification | ISO 6614, ASTM D1401 | min | 5 | 5 | 5 | 5 | 10 | 10 |
| Corrosion-rust protection | ISO 7210, ASTM D665B | | pass | pass | pass | pass | pass | pass |
| Copper Corrosion 3h/100 °C | ISO 2160, ASTM D130 | | 1b | 1b | 1b | 1b | 1b | 1b |
| Neutralisation Value | ASTM D974 | mgKOH/g | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| Seal Compatibility Index | IP 278 | | 20 | 18 | 12 | 11 | 10 | 9 |
| 24 h at 100 °C | | | | | | | | |
| FZG gear test : | IP 334, DIN 51 354 | load stage failure | - | - | 12 | 12 | 12 | 12 |
| A/8.3/90 °C | | | | | | | | |

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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