

Gazpromneft Hydraulic HLP – 32, 46, 68 and 100

Hydraulic Oils



Hydraulic systems



Anti-wear protection



Excellent filterability



Low foaming



Corrosion protection



Mineral

Gazpromneft Hydraulic HLP oils use high quality, high viscosity index mineral oil and additive package to provide outstanding protection in most manufacturing and many mobile equipment operations. They resist breakdown under heat or mechanical stress and help prevent damaging deposit formation that can decrease the efficiency of hydraulic power systems. Proven zinc-based anti-wear additives effective throughout the range of operating conditions. Gazpromneft Hydraulic HLP oils meet the most performance requirements of a wide range of hydraulic system and component manufacturers.

Applications

- Wide range of industrial hydraulic systems
- Suitable for systems with high intensity of hydraulic power including injection molding and high pressure metal pressing
- High output piston, gear, vane and axial-piston pumps
- Hydraulic pumps by wide range of manufacturers, including Denison, Cincinnati Machine, Eaton Vickers, Bosch Rexroth, Battenfeld, Beltramelli

| Features | Advantages and Potential Benefits |
|---|--|
| Enhanced anti-wear protection | Help extend component life and improve production capacity |
| Superior cleanliness | In combination with active additives reduce the impact of contaminants on filter blocking to prolong the life of hydraulic equipment |
| Excellent thermal and oxidation stability | Reduce maintenance downtime and costs by contributing to system cleanliness and deposit reduction, enable long oil and filter life |
| Corrosion protection | High acid neutralizing properties provide superior protection of steel and iron materials to extend overhaul intervals |
| Compatible with all common seal materials | Maintains effective leakage control |
| Fast air release and low foaming | Provide efficient hydraulic power transfer and minimize cavitation to prolong equipment life |

Gazpromneft Hydraulic HLP series meets the requirements of

| Specifications | Gazpromneft Hydraulic HLP | | | |
|------------------|---------------------------|----|----|-----|
| | 32 | 46 | 68 | 100 |
| DIN 51524 Part 2 | ✓ | ✓ | ✓ | ✓ |
| ISO 11158 | ✓ | ✓ | ✓ | ✓ |
| Bekum | | ✓ | | |
| Danieli | | ✓ | ✓ | |
| NATO | | ✓ | ✓ | |
| Demag | | | ✓ | |

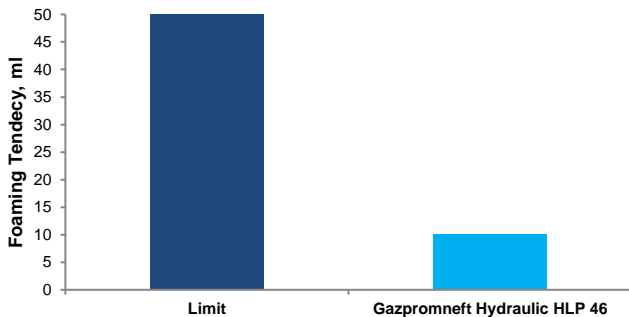
Gazpromneft Hydraulic HLP series has the following builder approvals

| Specifications | Gazpromneft Hydraulic HLP | | | |
|---|---------------------------|------|-------|-------|
| | 32 | 46 | 68 | 100 |
| Bosch Rexroth RDE 90245 Fluid Rating List | ✓ | ✓ | ✓ | |
| Battenfeld | meets | ✓ | meets | meets |
| Beltramelli | ✓ | ✓ | ✓ | meets |
| Denison Hydraulics HF-0,1,2 | ✓ | ✓ | ✓ | meets |
| Eaton Vickers 35VQ25 | ✓ | ✓ | ✓ | meets |
| ENGEL | | ✓ | | |
| Fives Cincinnati | P-68 | P-70 | P-69 | |
| Woojin Plaimm | ✓ | ✓ | ✓ | |

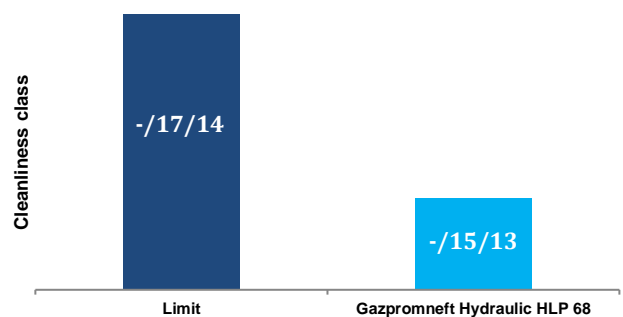
Typical Characteristics

| Properties | Method | Gazpromneft Hydraulic HLP | | | |
|-----------------------------------|------------|---------------------------|---------|---------|---------|
| | | 32 | 46 | 68 | 100 |
| ISO Viscosity Grade | | 32 | 46 | 68 | 100 |
| Kinematic Viscosity @40°C, mm²/s | ASTM D445 | 32 | 46 | 68 | 100 |
| Kinematic Viscosity @100°C, mm²/s | ASTM D445 | 5,5 | 6,8 | 8,7 | 11,1 |
| Viscosity Index | ASTM D2270 | 108 | 100 | 99 | 94 |
| Flash Point (COC), °C | ASTM D92 | 229 | 227 | 238 | 242 |
| Pour Point, °C | ASTM D97 | -38 | -34 | -33 | -30 |
| Total Acid Number, mg KOH/g | ASTM D664 | 0,6 | 0,6 | 0,6 | 0,6 |
| Cleanliness class, max | ISO 4406 | -/15/13 | -/15/13 | -/15/13 | -/15/13 |
| Density @15°C, kg/m³ | ASTM D4052 | 876 | 885 | 886 | 891 |

Excellent foaming control*



Superior cleanliness**



*ASTM D892; **ISO 4406

Health, Safety & Environment

Information is provided for products in the relevant Safety Data Sheet (SDS). This provides guidance on potential hazards, precautions and first-aid measures, together with environmental effects and disposal of used products. SDS's are available upon request through your sales contract office. This product should not be used for purposes other than its intended use.