

FUNCTIONAL MH-7000

Methacrylate-based Viscosity Index Improver for Hydraulic Fluid and Gear Oil

APPLICATION:

FUNCTIONAL MH-7000 is a liquid-form polyalkylmethacrylate viscosity modifier that offers high thickening efficiency with excellent shear stability. **FUNCTIONAL MH-7000** has been specifically formulated to provide additional VI improvement, demulsibility, and pour point depressancy. The high shear stability also makes **FUNCTIONAL MH-7000** attractive in gear oil formulations.

COMPOSITION:

FUNCTIONAL MH-7000 is a blend of polyalkylmethacrylates and highly refined mineral oil.

| Typical Properties | |
|--|--------------------|
| Lbs per Gallon (ASTM D 1475) | 7.8 |
| Specific Gravity | 0.93 |
| Kinematic Viscosity (ASTM D 445) | 1500 at 100 °C |
| Thickening Efficiency (10% in ISO 32) | 15.0 cSt at 100 °C |
| PSSI (5% in 150N, ASTM D 6278) | 36% |
| Sonic Shear (ASTM D5621, 3.7% in 150N) | 71% |
| Flash Point (ASTM D 92) | >150°C |
| Color (ASTM D 1500) | < 2.0 |

TREATMENT LEVEL:

Typical treatment level for methacrylate-based viscosity modifiers ranges from 5 to 10% for hydraulic fluids and 5% to 20% for gear oils.

3.7wt% **FUNCTIONAL MH-7000** will increase an ISO 32 oil to ISO 46.

FUNCTIONAL MH-7000 Treat Level vs. Viscosity @ 100°C

| wt% Treat | 100N Oil (ISO 22) | 150N Oil (ISO 32) | 200N Oil (ISO 46) | 350N Oil (ISO 68) |
|-----------|-------------------|-------------------|-------------------|-------------------|
| 0% | 3.9 | 5.4 | 6.5 | 8.3 |
| 10% | 12.3 | 14.5 | 16.8 | 21.3 |

HANDLING:

FUNCTIONAL MH-7000 should be warmed to about 50°C (120°F) to facilitate pumping and handling. The base oil should be heated to 60-80°C (140-180°F) during blending to allow for good mixing. Mixing time will vary with equipment but is typically at least one hour. Safe handling precautions are the same as those to be taken with base oil; see the current Safety Data Sheet.