

# TECHNICAL DATA SHEET

## QUINTOLUBRIC 853 68

### FIRE RESISTANT HFD-U HYDRAULIC FLUID

QUINTOLUBRIC 853 68 was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist.

#### Applications

QUINTOLUBRIC 853 68 can also be used in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operations. This fluid does not contain water, mineral oil, or phosphate ester, and is based on high-quality, natural esters and synthetic ester with carefully selected additives to achieve excellent hydraulic fluid performance. QUINTOLUBRIC 853 68 does not need to be filtered before use, as it has been filtered for multiple times during production process and has good cleanliness.

#### Properties

| PROPERTY                       | TYPICAL VALUE                  |
|--------------------------------|--------------------------------|
| Appearance                     | Light Amber fluid              |
| Kinematic Viscosity(ASTM D445) |                                |
| At 40°C                        | 65.7 mm <sup>2</sup> /s or cSt |
| At 100°C                       | 13.2 mm <sup>2</sup> /s or cSt |
| Viscosity Index(ASTM D2270)    | 207                            |
| Density at 15°C(ASTM D1298)    | 0.94 g/cm <sup>3</sup>         |
| Acid Number(ASTM D 974)        | 1.2 mg KOH/g                   |

#### Benefits

- Excellent lubrication properties
- No harmful ingredients, no toxin
- Excellent biodegradability

| PROPERTY                                                | TYPICAL VALUE         |
|---------------------------------------------------------|-----------------------|
| Pour Point(ASTM D97)                                    | -18°C                 |
| Foam Test at 25°C<br>(ASTM D892)<br>Sequence I          | 10-0 ml-ml            |
| Corrosion Protection<br>ISO 4404-2<br>(ASTM D665A/D130) | Pass<br>Pass/1b       |
| Flash Point(ASTM D92)                                   | 315°C                 |
| Fire Point(ASTM D92)                                    | 347°C                 |
| Air Release(ASTM D3427)                                 | 20 min                |
| Pump Test(ASTM D2882)                                   | <5mg wear             |
| Gear Lubrication<br>(DIN 51354-2)                       | >12 FZG load stage    |
| Demulsification(ASTM D1401)                             | 42ml-37ml-1ml (25min) |

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### Compatibility

The chart below contains our recommendations regarding the use of QUINTOLUBRIC 853 68 with commonly used elastomers. The elastomer applications listed are "Static," which refers to trapped nonmoving seals such as O-rings in valve sub-plates and rigid, low pressure hose connections; "Mild- Dynamic," whose applications include accumulator bladders and hose linings where the hoses are exposed to high pressure and light flexing; and "Dynamic," which refers to cylinder rod seals, pump shaft seals and constantly flexing hydraulic hose.

### Elastomers

| ISO 1629 | DESCRIPTION                                                   | S* | MD* | D* |
|----------|---------------------------------------------------------------|----|-----|----|
| NBR      | Medium to high nitrile rubber<br>(Buna N, >25% acrylonitrile) | C  | C   | C  |
| FPM      | Fluoroelastomer (Viton)                                       | C  | C   | C  |
| CR       | Neoprene                                                      | S  | S   | S  |
| IIR      | Butyl rubber                                                  | S  | N   | N  |
| EPDM     | Ethylene propylene rubber                                     | N  | N   | N  |
| PU       | Polyurethane                                                  | C  | C   | C  |
| PTFE     | Teflon                                                        | C  | C   | C  |

\*(S- Static, MD- Mild Dynamic, D- Dynamic)

C = Compatible

S = Satisfactory for short term use, but replacement with a completely compatible elastomer is recommended at the earliest convenience

N = Not Compatible

Most standard materials like NBR or buna (medium to high nitrile rubber) are compatible, but because of the number of material types available and variations in their application, specific recommendations should be solicited from the materials manufacturer,

or Quaker Houghton. Excellent results are obtained with FPM (Viton) and it is therefore recommended for higher system temperatures.

### Metals

QUINTOLUBRIC 853 68 is compatible with iron and steel alloys and most nonferrous metals and their alloys. It is not compatible with lead, cadmium and has limited compatibility with alloys containing high levels of these metals.

QUINTOLUBRIC 853 68 has limited compatibility with hot dipped or electro galvanized surfaces and good compatibility with zinc containing alloys. Suitable substitutes for these materials are available and should be used.

### Paints and Coatings

QUINTOLUBRIC 853 68 is compatible with multi-component epoxy coatings. It is not compatible with zinc-based coatings. Specific coating and application recommendations can be obtained from coating manufacturers or directly from Quaker Houghton.

### Fluids

QUINTOLUBRIC 853 68 is compatible and miscible with nearly all mineral oil and polyolester-type hydraulic fluids and with some, but not all, phosphate esters. It is not miscible or compatible with water-containing fluids. For conversion recommendations, please contact Quaker Houghton.

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