



Product Name: HYDRÖI Hydraulic Oil HFD

ISO Classification: HFD

Viscosity Grades: ISO VG 46, 68, 100

Quality: Synthetic

Recommended for: For electro-hydraulic control systems in **steam and gas turbines, fire-prone hydraulic systems, and industries requiring high fire resistance**, such as **steel plants, mining, and power generation**.

Application: Electro-hydraulic systems

Drain Interval: 6000 Hr

Product Overview

HYDRÖI Fire-Resistant Hydraulic HFD is a premium **synthetic organic ester-based** hydraulic fluid designed to replace conventional mineral oil-based hydraulic oils in applications where **fire hazards exist**. It offers **exceptional thermal stability, fire resistance, and superior lubrication performance**, ensuring safe and efficient operation of hydraulic systems. This fluid is **fully biodegradable, non-toxic, and meets Factory Mutual (FM) fire resistance standards**.

Application

HYDRÖI Fire-Resistant Hydraulic HFD is ideal for:

- Electro-hydraulic governor control systems in steam and gas turbines
- Hydraulic systems operating in fire-prone environments (steel plants, power generation, mining, aviation, foundries)
- High-temperature hydraulic applications requiring stable viscosity and oxidation resistance
- Environmentally sensitive applications where fluid toxicity is a concern

Performance Benefits

- **Fire-Resistant Formulation:** High ignition temperature and low heat release properties reduce fire hazards
- **Superior Wear Protection:** Matches the performance of premium anti-wear hydraulic oils
- **Excellent Oxidation & Thermal Stability:** Prevents sludge formation and extends fluid life
- **Fully Biodegradable & Non-Toxic:** Safe for both operators and the environment
- **Wide Compatibility:** Works with most hydraulic components and elastomers (except lead, cadmium, zinc alloys)
- **Emulsifies Water & Contaminants:** Ensures consistent lubrication even in harsh conditions.

Performance Specifications:

- DIN 51524 HFD
- ISO 6743-4 HFDU
- FM Global Approved Fire-Resistant Fluid
- Compliant with major OEM requirements for fire-resistant hydraulic applications





Typical Properties

Property	Unit	VG 46	VG 68	VG 100
Kinematic Viscosity @ 40°C	mm ² /s	46.0	68.0	100.0
Kinematic Viscosity @ 100°C	mm ² /s	10.2	11.0	15.5
Viscosity Index	-	180	185	190
Density @ 15°C	kg/m ³	0.920	0.925	0.930
Flash Point (COC)	°C	270	275	290
Pour Point	°C	-39	-36	-30
Air Release (50°C)	min	≤3	≤3	≤3
Foam Tendency (Seq I, 24°C)	ml	20/0	20/0	20/0
Fire Point	°C	380	385	400
Auto-Ignition Temperature	°C	500	505	520

Health, Safety, and Environmental Guidelines:

- **Handling:** Avoid prolonged skin contact; wash immediately with soap and water if contact occurs.
- **Disposal:** Dispose of used oil responsibly at authorized collection points.
- **Storage:** Keep tightly closed and store in a dry, well-ventilated area between **0°C and 40°C**.

