

***ANHYDROUS
FIRE RESISTANT
HYDRAULIC FLUIDS***



***ONE STOP SOLUTION FOR ALL YOUR
LUBRICANT NEEDS***



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SIGMA FIRO A SERIES

Fire Resistant Hydraulic Fluids

Description

The **Firo A series** HFD-U hydraulic fluids are **self-extinguishing anhydrous** oils, formulated from **organic esters** or synthetic oils and ultra-efficient additives. The synthetic esters and especially selected additives guarantee extremely reliable lubrication for the entire period of use and do not produce any toxic, unpleasant smelling decomposition products, even when burnt. Our fluids are compatible with the paint films, elastomers and seals generally used for mineral oils. Firo A series fluids are rapidly biodegradable and environment friendly.

Performance standards:

Meets the requirements of ISO 12922, L-HFDU Specification.

Application:

FIRO A series HFDU is suitable for all the usual hydraulic applications and is used where the environmental conditions mean there is a higher risk of explosion or fire in the case of leaks. These fluids can be used in the following industries,

- In **steel industry** for electric arc furnaces
- In **aluminium** industries
- In **mining operations**
- In underground works and **tunnels**
- In **quarries**
- In **foundries** under pressure
- In **incineration** factories



Typical Characteristics				
Properties	Test Method	Unit	FIRO A 46	FIRO A 68
Appearance			Clear liquid	Clear liquid
Density at 20°C	ASTM D 129 B	g/ml	0.918	0.925
Colour	ASTM D 1500		Yellowish	Yellowish
Viscosity at 40°C	ASTM D 445	mm ² /sec	47	64
Viscosity at 100°C	ASTM D 445	mm ² /sec	9.2	11.7
Viscosity index	ASTM D 2270		185	185
Pour point	ASTM D 97	°C	-35	-30
Copper corrosion test	ASTM D 130	Corr. level	1	1
Anti-corrosion performance	ASTM D 665			
Stage A		Visual	No rust	No rust
Stage B		Visual	No rust	No rust
Biodegradability	ISO 9439 / OECD 301B	%	>80	>80
Flash point, C.O.C.	ASTM D 92	°C	270	280
Fire point	ASTM D 92	°C	338	358

