



HFA  
HFC  
HFD

# FIRE-RESISTANT HYDRAULIC FLUIDS



# FIRE-RESISTANT HYDRAULIC FLUIDS

Hydraulic fluids are commonly made of flammable mineral oils. In areas with a high risk of fire or explosion, mineral oils represent a significant safety hazard. Consequently, Petrofer has a full range of fire resistant hydraulic fluids. These products have been continually improved over the past 50 years, resulting in Petrofer being a market leader in this technology. Accordingly, our modern fire-resistant hydraulic fluids do not only fulfill the primary task of pressure transmission; furthermore, they have the highest standard of fire protection, anti-wear properties, corrosion protection and long-term resistance against microbial attack. We also hold many OEM approvals for the product range.



To fulfill the various demands on hydraulic fluids, PETROFER developed superior solutions for water hydraulics. Our modern products meet the most challenging technical and ecological requirements and are approved by well-known OEMs. We supply mineral oil based HFA-E fluids as well as mineral oil free HFA-S fluids.

## HFA-S fully-synthetic concentrates for water hydraulics

PRODUCT	APPLICATION RANGE	APPROVALS	CONC.
ULTRA-PRESS 5	Synthetic hydraulic fluid, especially for hydroforming		2–5 %
ULTRA-PRESS 20	Synthetic hydraulic fluid for the application in mining and industry (Steel mills, hydraulic presses)	7th Lux. report, gap corrosion test according to RAG-norm	2–5 %

## HFA-E emulsion concentrates for water hydraulics

PRODUCT	APPLICATION RANGE	APPROVALS	CONC.
ULTRA-SAFE 10 MPL	Mineral oil based hydraulic fluid for the application in mining and industry	Główny Instytut Górnictwa (GIG) Poland, GOST	2–5 %
ULTRA-SAFE 10 E	Ester based hydraulic fluid for the application in mining and industry, excellent biodegradability	7th Lux. report, marco, Joy approval, FAZOS, Tiefenbach, GOST	2–5 %
ULTRA-SAFE 10 EF	Formaldehyde free, ester based hydraulic fluid for the application in steel mills, forging presses and mining		2–5 %
ULTRA-SAFE 15 SI	Ester based high performance hydraulic fluid for the application in mining and industry, excellent biodegradability, fulfills the crevice corrosion test according to RAG standard	7th Lux. report, Caterpillar, marco, Tiefenbach, GOST	2–5 %

## ANTI-FREEZE AND CORROSION PREVENTING AGENT

PRODUCT	APPLICATION RANGE	APPROVALS
ULTRA-FREEZE AF 45	<ul style="list-style-type: none"> <li>– storage of hydraulic components like cylinders, pumps, valves</li> <li>– calibration of cylinders, pumps, valves etc.</li> <li>– heat exchanger e.g. for building cooling</li> </ul>	Caterpillar, DMT, GOST



Due to the careful selection of raw materials our HFC products fulfil the highest technological requirements. For many years ULTRA-SAFE has been used successfully, particularly in the die-casting industry. There are many further applications, for example in the Navy. Thanks to excellent cooperation with OEMs like Bühler, Frech, Bosch-Rexroth etc. all-important approvals have been achieved.

## HFC water-glycol-fluid with a water content > 35%

PRODUCT	APPLICATION RANGE	V40 [mm <sup>2</sup> /s]
ULTRA-SAFE 620	<ul style="list-style-type: none"> <li>– foundry</li> <li>– steel industry</li> <li>– mining</li> </ul> Tested and approved according to the 7th Luxembourg report	> 36,0 < 40,0
ULTRA-SAFE 360	<ul style="list-style-type: none"> <li>– foundry</li> <li>– steel industry</li> <li>– mining</li> </ul> Hydraulic fluid with increased viscosity	> 52,0 < 60,0
ULTRA-SAFE OX 40	Hydraulic fluid for marine applications, resistant to sea water	> 42,0 < 46,0

## HFC-E water-glycol-fluid with a water content < 20 % and excellent anti-wear properties

PRODUCT	APPLICATION RANGE	V40 [mm <sup>2</sup> /s]
ULTRA-SAFE E 68	<ul style="list-style-type: none"> <li>– mining, particularly mobile hydraulics</li> <li>– roadheading machines for tunnel construction</li> <li>– machines used in road construction and forestry</li> </ul>	ISO 68





ENVOLUBRIC products are synthetic anhydrous hydraulic fluids with similar hydraulic properties to conventional hydraulic oils. Due to their composition, ENVOLUBRIC products show excellent stability against ageing and hydrolysis as well as outstanding anti-corrosion properties. Our products are characterised by high flashpoints and high auto-ignition temperatures.

HFD -R: based on phosphorus acid esters -U: based on synthetic esters

PRODUCT	APPLICATION RANGE	V40 [mm²/s]
ULTRA-SAFE 1120 (HFD-R)	– fluid coupling – control systems of steam and gas turbines	ISO 46
ENVOLUBRIC HE 46 (HFD-U)	– foundry – steel industry – mobile hydraulics Factory Mutual approved	ISO 46
ENVOLUBRIC HE 68 (HFD-U)	– foundry – steel industry – mobile hydraulics Factory Mutual approved	ISO 68

HEPG products based on polyglycols

PRODUCT	APPLICATION RANGE	V40 [mm²/s]
ENVOLUBRIC PG 46 NWL	– foundry – steel industry – mobile hydraulics	ISO 46
ENVOLUBRIC PG 68 NWL	– foundry – steel industry – mobile hydraulics	ISO 68





PETROFER CHEMIE | H. R. Fischer GmbH + Co. KG | Römerring 12 – 16 | 31137 Hildesheim | Germany  
Phone +49 51 21 / 76 27 0 | Fax +49 51 21 / 76 27 22 11 | Mail [info@petrofer.com](mailto:info@petrofer.com) | [www.petrofer.com](http://www.petrofer.com)