

# TECHNICAL DATA SHEET

## HOUGHTO-SAFE® 1130

### PHOSPHATE ESTER TYPE FIRE RESISTANT HYDRAULIC FLUID



HOUGHTO-SAFE 1130® is a phosphate ester fluid that is approved for operation in all types of pumps and associated hydraulic components. It combines fire resistance with excellent lubricating properties and is Factory Mutual Approved.

HOUGHTO-SAFE® 1130 is manufactured from triaryl phosphate ester plus corrosion and oxidation inhibitors. These inhibitors extend the fluid service and insure maximum hydraulic circuit component life with lower maintenance costs.

HOUGHTO-SAFE® 1130 can be used at elevated temperatures up to 150°F, but for optimum fluid life we recommend a reservoir temperature of 120°F. Many years of field experience confirm that HOUGHTO-SAFE® 1130 excels in fire resistance, component lubrication, thermal stability, and corrosion prevention.

HOUGHTO-SAFE® 1130 is compatible with all metals common to hydraulic power circuits, including steel, cast iron, copper, bronze, brass, zinc, cadmium, aluminum and magnesium.

HOUGHTO-SAFE® 1130 is compatible with the following elastomers: butyl, ethylene propylene, Viton, silicon, and chlorinated polyethylene.

HOUGHTO-SAFE® 1130 is not compatible with water containing fluids such as water glycols, water in oil emulsion and high water content fluids. All standard filtration techniques are satisfactory with HOUGHTO-SAFE® 1130. Blotter type filter elements will remove water contamination. Activated earth or alumina can be used to reclaim degraded or contaminated fluid.

### Applications

HOUGHTO-SAFE® 1130 was designed to replace mineral oil based hydraulic fluid. HOUGHTO-SAFE® 1130 can be used in or near fire hazards applications without compromising the overall hydraulic system operation.

### Benefits

- Improved security against fire
- Extends equipment service life through reliable system and component protection
- Resists oxidation and water degradation
- Extends fluid service and reduces maintenance costs
- Increases plant uptime

### Recommendations for Use

HOUGHTO-SAFE® 1130 can be used in equipment designed for traditional mineral oil in applications where a fire hazard exists.

### Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.



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### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Clear yellow mobile fluid	
Viscosity at 45°F at 100°F at 210°F*	4000   866 300   64.7 46   6.0"	SUS   cSt
ISO Grade	68%	cSt
Total Acid Number	0.2 max	mg KOH/g
Specific gravity, at 60/60°F	1.14	
Pounds per Gallon	9.3	lbs/gal
Flash Point	464	°F

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