Obsolete

FIRE-RESISTANT HYDRAULIC FLUIDS

PHYSICAL-PROPERTY-COMPARISON CHART

OCTOBER 1961

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TOWOLDMON0022386
WATER_PCB-00006855

PHYSICAL PROPERTIES OF

Physical Property	PYDRAUL* 60	PYDRAUL 150 Socony-Mobil Pyrogard+ 42	PYDRAUL F-9	PYDRAUL A-200	PYDRAUL 625
Appearance	Clear Blue Liquid	Cloudy Blue Liquid	Cloudy Blue Liquid	Cloudy Blue Liquid	Cloudy Blue Liquid
Odor	Mild Ester Type	Mild Ester Type	Mild Ester Type	Mild Charac-teristic	Mild Ester Type
Specific Gravity	1.090 (75°F)	1.125 (75°F)	1.285 (75°F)	1.42 (60°F)	1.35
Viscosit (SUS) @100°F	62.5	143.3	235	230	628
210°F	35.1	51.6	44.7	42	45.9
Pour Point	−70°F	−55°F	−5°F	+10°F	+20°F
Flash Point	435°F	425°F	430°F	390°F	465°F
Fire Point	460°F	465°F	675°F	> 725°F	> 725°F
Autogeneous Ign. Temp.	895°F	970°F	1110°F	1220°F	1080°F
Max. Temp. Tolerated For Continuous Use	200°F	200°F	300°F	300°F	300°F
Acidity	0.15 (Max)	0.17 (Max)	0.30 (Max)	0.8 to 1.10	0.30 (Max)
Type of Fluid	Phosphate Ester	Phosphate Ester Base	Phosphate Ester Base	Chlorinated Hydrocarbon Base	Phosphate Ester Base

Physical Property	Houghto-Safe+ 1010	Houghto-Safe 1055	Houghto-Safe 1120	Irust 902	Minesafe+ Sunsafe+
Appearance	Light Green Liquid	Light Green Liquid	Light Green Liquid	Yellow Liquid	Liquids Sunsafe-cream Minesafe-white
Odor	None	None	Mild Ester Type	Mild Pleasant	None
Specific Gravity	1.17 (25°C)		1.15 (60°F)	0.93 (60°F)	0.92-0.93 (60°F)
Viscosity (SUS) @100°F	123	560	230	450 Rest	375-500
@210°F	39	52	43.4	253 Motion	-
Pour Point	−25°F	+25°F	0°F	-	0°F
Flash Point	480°F	505°F	485°F	-	-
Fire Point	-	675°F	670°F	-	-
Autogeneous Ign. Temp.	1200°F	1200°F	1200°F	-	-
Max. Temp. Tolerated For Continuous Use	-	-	-	150°F	150°F
Acidity	0.14	-	0.3	2.5	-
Type of Fluid	Phosphate Ester	Phosphate Ester	Phosphate Ester	Water-Oil Emulsion	Water-Oil Emulsion

*PYDRAUL is a Monsanto Chemical Company trademark. Registered in U.S. Patent Office.

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FIRE-RESISTANT HYDRAULIC FLUIDS

PYDRAUL AC	Cellulube† 90 Shell S. F. R. Fluid A	Cellulube 150 Shell S. F. R. Fluid B	Cellulube 220 Shell S. F. R. Fluid C	Cellulube 300 Shell S. F. R. Fluid D	Cellulube 550
Clear Blue Liquid	Clear Oily Liquid	Clear Oily Liquid	Clear Oily Liquid	Clear Transp. - Liquid	Clear Transp. Liquid
Mild Ester Type	Slight Mild	Slight Mild	Slight Mild	None	None
1.36 (60°F)	1.20-1.21 (20°C)	1.155-1.175 (20°C)	1.145-1.165 (20°C)	1.135-1.175 (20°C)	1.15-1.19 (20°C)
410	90	150	220	306	621
43	37	40	42	45.5	52
+20°F	−30°F	−10°F	0°F	+5°F	+20°F
470°F	455°F	455°F	455°F	455°F	455°F
> 725°F	665°F	665°F	665°F	665°F	665°F
1080°F	1150°F	1150°F	1150°F	1150°F	1150°F
350°F (Air Temp)	-	-	-	-	-
0.15 (Max)	0.1 (Max)	0.1	0.1	0.1	0.1
Phosphate Ester Base	Phosphate Ester	Phosphate Ester	Phosphate Ester	Phosphate Ester	Phosphate Ester

Celluguard 150	Celluguard† 200	Ucon† 150 CP	Ucon 275 CP	Houghto-Safe 620	
Red Liquid	Red Liquid	Cloudy Amber Liquid	Cloudy Amber Liquid	Cloudy Amber Liquid	
Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	
1.055	1.060 (60°F)	1.079 (20°F)	1.08 (20°F)	1.055	
150 (76 at 150°F)	205 (102 at 150° F)	158	276	200	
-	-	-	-	-	
−25°F	−20°F	−40°F	−25°F	−20°F	
-	None	-	-	-	
-	None	-	-	-	
-	-	-	-	-	
150°F	150°F	150°F	150°F	150°F	
-	-	-	-	-	
Water/Glycol	Water/Glycol	Water/Glycol	Water/Glycol	Water/Glycol	

†These terms are registered trademarks: Celluguard & Cellulube (Celanese), Houghto-Safe (E F Houghton), Irus (Shell Oil), Minesafe & Sunsafe (Sun Oil), Pyrogard (Socony-Mobil Oil), and Ucon (Union Carbide)

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Whatever their requirements, Your Customers get **PREVENTIVE-MAINTENANCE PROTECTION**, and **DOUBLE-ACTION FIRE RESISTANCE** with a **PYDRAUL** synthetic, hydraulic fluid.

●

PYDRAUL F-9

PYDRAUL A-200

for most indoor hydraulic applications that can use a medium-viscosity fluid.

●

PYDRAUL 150

for outdoor, low-temperature applications, such as Askania regulators in steel mills.

●

PYDRAUL 60

low-viscosity fluid for precision equipment or very-low-temperature operation.

●

PYDRAUL 625

high-viscosity fluid for heavy-duty applications.

●

PYDRAUL AC

For air-compressor lubrication. Prevents carbon deposits on exhaust valves and thus prevents compressor explosions and system fires.

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