From Monsanto FluiDesign Service...

FIRE-RESISTANT FLUIDS FOR NEW

The fifteen fire-resistant fluids described here are now at work in industrial and aircraft hydraulics, heat transfer and other mechanical applications which require a firesafe fluid. When you need a fire-resistant fluid for any application, one of these Monsanto specialized fluids may be adaptable to your job.

Consider how these and other specialized fluids might solve special-design engineering problems for you. If one of these fifteen does not meet your present requirements, Monsanto FluiDesign Service will make other recommendations for your application. Just send a brief description of the conditions which your fluid must meet.

For the specific properties you need, only Monsanto can make and help you select from so many kinds of specialized fluids, including

	Skydrol 7000	Skydrol 500A	Pydraul 60	Pydraul 150	Pydraul F-9	Pydraul A-200
Flash point, °F., Cleveland Open Cup	425°	360°	435°	380°	430°	380°
Fire point, °F., Cleveland Open Cup	475°	425°	460°	470°	675°	680°
Autoignition temp., °F.	1050°	>1100°	>1000°	>1100°	>1100°	>1200°
Viscosity, cs. 100°F.	15.5	11.5	11.1	30.8	47	49.5
210°F.	4.00	3.92	2.65	8.0	5.5	4.8
Pour point, °F.	<−70°	<−85°	−70°	−55°	−5°	10°
Boiling point, °F. 760 mm. Hg	709°	—	707°	617°	644°	620°
Max. bulk temp., °F. long term	200°	225°	200°	200°	300°	300°
Coefficient of thermal expansion, per °F.	0.00042	0.00045	—	0.00042	0.00041	0.00040
Specific heat, 25°C.	0.42	0.38	0.42	0.40	0.32	0.28
Thermal conductivity Btu/hr./ft.^{2}/ft./°F.	0.0723	0.0777	0.047	0.070	0.067	0.059
Bulk modulus, psi	328,000	308,000	328,000	310,000	387,000	400,000
Specific gravity, 25°/25°C.	1.08	1.07	1.09	1.13	1.28	1.42
Resistivity, ohm-cm, 25°C.	5×10^8	4×10^7	—	—	1.5×10^9	3.3×10^{10}
Dielectric strength, 25°C., 60 cps., 0.1 in.	36KV	12KV	—	—	33KV	38KV
Dielectric constant, 25°C., 1000 cps.	8.87	8.81	—	—	6.25	—
Power factor, % 1000 cps., 25°C.	0.49	—	—	—	2.2	—
Original use	aircraft hydraulics	aircraft hydraulics	industrial hydraulics	industrial hydraulics	industrial hydraulics	industrial hydraulics

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MECHANICAL APPLICATIONS

phosphate esters, silicate esters, diphenyl and terphenyl and chlorinated derivatives. Monsanto has the best facilities and broadest know-how for making the widest variety of fluid "base" stocks and additive modifiers of any chemical manufacturer. Whatever your requirements, consult Monsanto if you need a fluid for a new product or machine-design concept.

Write:

MONSANTO CHEMICAL CO.
Organic Chemicals Division
FluiDesign Service, Dept. 2764A
St. Louis 66, Missouri

SKYDROL, PYDRAUL, AROCLOR: Monsanto T. M.s, Reg. U. S. Pat. Off.



Pydraul 625	Pydraul AC	OS-81	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Transformer Askarel
465°	420°	—	295°	308°	360°	379°	—	460°
745°	650°	—	349°	460°	>610°	>640°	>660°	460°
>1100°	1100°	1100°	>1000°	>1100°	>1200°	>1200°	>1200°	1000°
135	88.2	35.25	4.6	6.9	17.2	45.3	500	5.0
6.1	5.15	3.18	1.2	<1.8	2.5	3.2	6.14	1.5
20°	20°	15°	34°	−32°	2°	20°	50°	47°
724°	688°	—	527°	554°	617°	644°	689°	460°
300°	300°	300°	600°	600°	600°	600°	600°	600°
—	0.00040	—	0.00039	0.00040	0.00038	0.00039	0.00037	0.00039
—	—	0.31	0.33	0.31	0.29	0.27	0.26	0.25
0.065	—	—	0.067	0.063	0.058	0.057	0.054	0.050
375,000	375,000	—	—	—	—	428,000	—	—
1.36	1.35	1.40	1.18	1.26	1.38	1.45	1.54	1.57
—	—	—	1×10^{12}	1×10^{12}	1×10^{12}	1×10^{12}	1×10^{12}	5×10^{11}
—	—	—	>35KV	>35KV	>35KV	>35KV	>35KV	35KV
—	—	—	4.5	5.4	5.8	5.6	5.0	4.0
—	—	—	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Industrial hydraulics	air-compressor lubrication	turbine and compressor lubricant	plasticizer	plasticizer	capacitor impregnant; heat transfer	heat transfer	capacitor impregnant	transformer dielectric

; Product Engineering, October 24 and November 28, 1960.

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