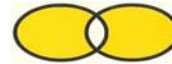


UniSource Energy, Inc.
Inhibited Transformer Oil
Typical Properties



Supplier Name	UNISOURCE
Product Name	UNISHIELD® 61 JS

Physical Properties	ASTM NO.	
Specific Gravity @ 60°/60° F	D 1298	0.8871
Color, ASTM	D 1500	L 0.5
Viscosity, SSU @ 100° F	D 88	60.2
SSU @ 210° F	D 88	34
cSt @ 40° C	D 445	9.63
cSt @ 100° C	D 445	2.31
Aniline point, ° F (° C)	D 611	167 (75)
Flash Point, COC, ° F (° C)	D 92	300 (149)
Pour Point, ° F (° C)	D 97	-76 (-60)
Chemical Properties		
Oxidation Inhibitor, wt %	D 2668	0.28
Sulfur, Wt. %	D 1275	Pass
Water, ppm	D 1533	< 30
Electrical Properties		
Dielectric break voltage @ 60 Hz	D 877	
Disc electrodes, kV		45
Power Factor @ 60 Hz, %	D 924	
@ 25° C		0.003
@ 100° C		0.074

Chemical Abstract #	64742-53-6 Nov-03
---------------------	----------------------

*The values shown here are representative of current production.
Some are controlled by manufacturing specifications, while others are not.
All may vary within modest ranges.*