

PRODUCT SPECIFICATION SHEET

Product Name: Polywater® SPY Cable Lubricant

Physical Properties	
Appearance	Slightly thickened white liquid
Color	Translucent white
String	None
Foaming	Slight
Vapor Pressure	18 mm @ 72° F
Specific Gravity (H2O = 1)	1.0
Percent Volatiles (Weight)	96%
Viscosity	250 - 75 cps @ 10 rmp
VOC Content	0 gms / L
Utilization Temperature	28° to 120° F (-2° to 50° C)
Boiling Point	>212° F / 100° C
Temperature Range	20° to 120° F (-5° to 50° C)
Ignition Temperature	None
Vapor Density (Air = 1)	> 1
Solubility in Water	Dispersible
Percent Water (Weight)	> 90%
Percent Solids	4.2%
pH	7.5 to 90
Residue Appearance	Slippery film
Wetting after 1 min on XLPE	> 99% wetting
Product Materials	Water and polymers

Compatibility				
Jacket Type		Elongation		Max Tensile Strength
PVC (non-aged control)		206%		1210 psi
PVC (aged 180 days, 50° C)		170%	83% - pass	1130 psi 93% - pass
XLPE (non-aged control)		368%		836 psi
XLPE (aged 180 days, 50° C)		334%	91% - pass	800 psi 96% - pass

Friction			
Cable	Conduit	Polywater® SPY M _k @ 200 LBS/FT	Bare (Unlubricated) M _k @ 200 LBS/FT
XLPE	Rigid Steel	0.08	0.39
PVC	Rigid Steel	0.10	0.38
THHN	Rigid Steel	0.10	0.17
Enhanced THHN	Rigid Steel	0.09	0.17
XLPE	EMT *	0.17	0.42
PVC	EMT *	0.21	0.36
THHN	EMT *	0.17	0.25
Enhanced THHN	EMT *	0.11	0.22
XLPE	SCH 40 PVC	0.06	0.45
PVC	SCH 40 PVC	0.06	0.52
THHN	SCH 40 PVC	0.07	0.35
Enhanced THHN	SCH 40 PVC	0.07	0.25
* EMT conduit shows wide variance depending on manufacturer, and friction values (μk) show a wide range of values. Polywater SPY Lubricant reduces friction on the EMT tested.			

Dry Coefficient of Friction				
Cable	Conduit	M _k @ 200 LBS/FT		
		Dry Polywater® SPY	Control Polywater® SPY	Bare (unlubricated)
XLPE	Rigid Steel	0.12	0.08	0.39
PVC	Rigid Steel	0.10	0.10	0.38
THHN	Rigid Steel	0.12	0.10	0.17
Enhanced THHN	Rigid Steel	0.15	0.09	0.17
XLPE	EMT *	0.16	0.17	0.42
PVC	EMT *	0.20	0.21	0.36
THHN	EMT *	0.22	0.17	0.25
Enhanced THHN	EMT *	0.22	0.11	0.22
XLPE	SCH 40 PVC	0.06	0.06	0.45
PVC	SCH 40 PVC	0.07	0.06	0.52
THHN	SCH 40 PVC	0.07	0.07	0.35
Enhanced THHN	SCH 40 PVC	0.08	0.07	0.25