



## Ester Based Mud Resistant Jacketed Cables

110°C • UL Marine Shipboard Cable

AmerCable has developed a new World Class Mud Resistant cable designed to deliver outstanding performance in the harshest operating conditions, specifically in **high temperature ESTER BASED drilling muds**. This cable has a new jacket that meets all the performance requirements of industry standards UL 1309 and IEEE 1580 for Type N jackets and when tested with the most aggressive ester based drilling mud, easily passes the mud resistance requirements of NEK 606.

These new mud resistant cables were tested against the requirements of UL 1309 and IEEE 1580 and the results are shown in Table I.¹ This product easily passed all the requirements. Table II shows the results of this cable when aged in Baroid Petrofree® (Ester Based) drilling mud per NEK 606. All aging requirements were met. Additional testing done on these cables show the jacket to pass cold impact at -20°C and cold bend at -40°C.

## Table I

World Class Mud Resistant	Specifications	UL-1309 Table 4	IEEE 1580 Table 5-7	AmerCable Testing Program <sup>1</sup>	
Jacket	Jacket Type	Type N	Type N	Mud Resistant Jacket	
Physical Requirements – Unaged	Tensile Strength, Min, PSI	1800	1800	Pass	
	Elongation at Rupture, Min, %	300	300	Pass	
	Set, Max, %	20	20	Pass	
Aging Requirements 90°C Rated Jacket 121±1°C Air Oven 240 Hours	Tensile Strength, Minimum	900 psi	900 psi	Pass	
	Elongation at Rupture, %	50% Actual	50% Actual	Pass	
Oil Exposure Resistance After Oil Immersion at 121±1°C 18 Hours	Tensile Strength, % Retention of Unaged, Min	80	80	Pass	
	Elongation at Rupture, % Retention of Unaged, Min	60	60	Pass	
Mechanical Water Absorption	mg / in²	100	130	Pass	
Weatherometer Test	Per UL 1581	No Requirement	Pass	Pass	
Tear	lb/in Thickness, Min	No Requirement	35	Pass	
FT4/IEEE 1202 Flame Exposure (UL-1685)	_	Pass	Pass	Pass	
IEC 332-3 Flame Exposure	_	No Requirement	No Requirement	Pass	

## Table II

MUD Resistant – NEK 606	Requirements		Mud Type	Results
	Elongation at Break	±25%	Baroid Petrofree® (Ester Based)	Pass
Note: Tested for Changes in Each Listed Requirement 70°C, 56 Days	Tensile Strength	±25%	Baroid Petrofree® (Ester Based)	Pass
	Volume Swelling	Max 20%	Baroid Petrofree® (Ester Based)	Pass
	Weight Increase	Max 15%	Baroid Petrofree® (Ester Based)	Pass
	Oxygen Index	Min 25%	Baroid Petrofree® (Ester Based)	Pass

<sup>&</sup>lt;sup>1</sup> All results representative of finished cables (6 3/C, 14 7/C and 18 7 PR). Test data on file at AmerCable