Recommended Sheath Materials

Media Being Heated	Element Sheath Material																		
	Iron & Steel	Gray Cast Iron	Cast Iron Ni-Resist	Aluminum	Copper	Lead	Monel 400	Nickel 200	304, 321, 347 Stn. Stl.	316 Stn. Stl.	Type 20 Stn. Stl.	Incoloy® 800	Inconel® 600	Titanium	Hastelloy B	Quartz	Graphite	Teflon®	*Notes
Chrome Plating	X	X		X	X	F	X	X	X	X	X	X	X	A		A	A	X	
Chromic Acid	X	C	X	X	X	F	X	X	X	X	X	X	X	A		A	A	X	
Chromylite																A			Note 1
Citric Acid	X	X	C	C	C	X	F	F	C	C	F	F	F	A	A	A	A	A	
Clear Chromate										A									Note 1
Cobalt Acetate at 130°F							F	F	A	A		F	F						
Cobalt Nickel																A			Notes 1, 6
Cobalt Plating									A							A			Note 1
Coconut Oil							F	A											
Cod Liver Oil				A				A	A	A	A	A	A						
Copper Acid														A		A			Note 1
Copper Bright									A	A									Note 1
Copper Bright Acid																A			
Copper Chloride	X	X		C	X	C	X	X	X	X	X	X	X	A		A	A	A	
Copper Cyanide	A	A		X	X		C	X	F	F	F	X	X			A	A	A	
Copper Fluoborate							F	F	F	F	F	F	F				A	A	
Copper Nitrate	X	X	X	X	X		X	X	F	F	F	X	X			A	A	A	
Copper Plating	A																		
Copper Pyrophosphate									A										Note 1
Copper Strike	A	A							A										Note 1
Copper Sulfate	X	X	F	X	C	A	X	X	F	F	A	C	X	A		A	A	A	
Creosote	A	F	F	C	F	X	F	F	F	F	F	F	F			A			Note 2
Cresylic Acid	C	C		C	C	X	F	F	F	A	A	C	F	F		A	A	A	Note 2
Deoxidine™									A										
Deoxlyte™									A										
Deoxidizer (Etching)																A			Note 1
Deoxidizer (3AL-13)									A	A									Note 1, Non-Chromate
Dichromic Seal	X	X																	
Diethylene Glycol	F	A		F	F	A	F	F	A	A	A	F	F	A		A	A	A	
Diphenyl 300° - 350°F	A	A	A	A	A	A	A	A	A		A		A						
Disodium Phosphate	A																		
Diversey™ DS9333																A			Note 1
Diversey™ 99	A																		
Diversey™ 511																A			Notes 1, 5
Diversey™ 514																	A	A	Note 1
Dowtherm™ A	A																		
Electro-Polishing																A			Note 1
Electroless Nickel														A		A			Note 1
Electroless Tin (Acid)																A			Note 1
(Alkaline)										A				A					Note 1
Enthone Acid-80																	A	A	Note 1
Ether	F	F		F	F	F	F	F	F	F	A	F	F	A		A			Note 2
Ethyl Chloride	F	F		F	A	F	F	A	F	F	A	F	A	A		A	A	A	Note 2

CAUTION

CORROSION POLICY

TEMPCO cannot warrant any electric immersion heater against failure by sheath corrosion if such failure is the result of operating conditions beyond the control of the heater manufacturer. The facts and recommendations appearing in the TEMPCO catalog or any other literature published by TEMPCO are based on our own research and the research of others, and are believed to be accurate. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used.

We accept NO responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. It is the responsibility of the Purchaser to make the ultimate choice of sheath material based on his/her knowledge of the chemical composition of the corrosive solution, character of materials entering the solution, and controls, which he/she maintains, on the process.

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