

Reference Data

Corrosion Guide for Electric Immersion Heaters *(cont'd.)*

Legend	Sheath Material														Notes	
	Aluminum	Carbon Steel	Copper	Cast Iron	INCONEL® 600	INCOLOY® 800	Lead	MONEL® 400	304, 321, 347 SS	316 SS	20Cb-3 SS	C276 Hastelloy®	Quartz	Titanium		Teflon®12
A = Good to Excellent B = Fair to Good C = Depends on Conditions X = Not Suitable Blank = Data Not Available																
Solution	Corrosion Rating															
Calcium Chloride (Sat.)	BC	B	B	B	B	B	X	B	BC	B	B	A	A	A	A	10 - 23
Carbon Dioxide - Dry Gas	A	B	BC	B	A	A	B	A	A	A	A	A	A	A	A	10 - 23
Carbon Dioxide - Wet Gas	A	X	X	X	A	A	B	A	B	B	A	B	A	BC	A	23 - 26
Carbon Tetrachloride	X	C	AC	X	A	A	AC	A	A	A	A	AC	A	A	A	
Carbonic Acid (Phenol)	B	B	X	C	A	AC	X	AC	A	A	A	A	A	A	A	
Castor Oil	BC	A	AC	A	A	A	A	A	BC	B	A	A	A	A	A	23 - 26
Caustic Etch	X	A	C	A	A	A	X	A	A	A	BC	X	A	A	A	15 - 26
Caustic Soda	SEE SODIUM HYDROXIDE														6	
Chlorine Gas - Dry	X	C	C	X	B	A	X	AC	C	BC	B	B	A	X	B	
Chlorine Gas - Wet	X	X	X	X	X	X	X	C	X	X	X	BC	A	X	B	
Chloroacetic Acid	X	X	X	X	C	C	X	C	X	X	C	AC	A	A	A	1
Chromic Acetate													A	A	A	1
Chromic Acid (40%)	X	X	X	X	X	X	B	X	BC	B	BC	B	A	A	X	1
Chromic Anodizing													A	A	A	1
Chromylite													A	A	A	1
Citric Acid (Conc.)	X	X	X	X	B	AC	X	B	BC	A	A	A	A	A	A	23 - 26
Clear Chromate										A	A	A	A	A	A	1
Cobalt Nickel										A	A	A	A	A	A	1, 6
Cod Liver Oil					A	A			A	A	A					1
Copper Acid													A		A	1
Copper Bright									A							1
Copper Bright Acid													A	A	A	1
Copper Chloride	X	X	X	X	X	B	X	X	X	X	X	B	A	A	A	
Copper Chloride													A	A	A	
Copper Cyanide	X		X	A	BC	B		X	B	B	B	B	A	AC	A	
Copper Fluoborate					B	B		B	B	B	B				A	
Copper Nitrate	X	X	X	X	X	BC		X	A	A	A	C	A	B	A	1
Copper Pyrophosphate									A	A	A					1
Copper Strike		A		A					A	B	B	B	A	A	A	1
Copper Sulphate	X	X	X	X	BC	B	A	X	B	B	B	B	A	A	A	6 - 15
Creosote	C	A	BC	A	B	B	X	B	B	B	B	B	A	A	A	2
Cresylic Acid 50%	C	BC		C	C	C	X	X	B	A	B	B	A	B	A	2
Deionized Water	SEE WATER															
Deoxidizer (Etching)													A			1
Deoxidizer (3AL-13 Non-Chrome)									A	A	A	AC				1
Detergents	BC		A		B				A	B	A		A	A	A	40 - 55
Dichromic Seal									A	A	A					
Diethylene Glycol	B	AC	B	A	B	B	A	B	A	A	A	B	A	A	A	
Diversey-DS9333™									A	A	A		A	A	A	1
Diversey-511™													A			1, 5
Diversey-514™													A		A	1
Dowtherm™ (Diphenyl)	X	A	C		A		B	A	A	A	A		A	A		23
Dur-Nu™									A							23
Electro Cleaner		A							A							1
Electropolishing													A	A	A	1
Electroless Nickel													A	A	A	1
Electroless Tin (Acid)													A	A	A	1
Electroless Tin (Alkaline)										A			A		A	1
Enthone Acid - 80																1
Ethers, General	B	B	B	B	B	A	B	B	A	A	B	B	A	B	A	2
Ethyl Chloride	B	B	B	B	A	A	B	B	A	A	A	B	A	A	A	2
Ethylene Glycol	A	A	B	B	A	A	X	B	B	A	A	A	A	A	A	5
Fatty Acids	A	X	C	X	B	AC	X	B	BC	A	A	A	A	A	A	23 - 30
Ferric Chloride	X	X	X	X	C	X	X	X	X	X	BC	BC	A	A	A	
Ferric Nitrate (< 50%)	X	X	X	X	X	BC		X	BC	B	A	BC	A	AC	A	
Ferric Sulphate	X	X	C	X	C	C	B	C	BC	AC	A	A	A	A	A	
Fluoborate													A	A	A	1
Fluoboric Acid	X	AC	X					B	BC	AC	AC	A		X	A	
Fluorine Gas (Dry)	AC	X	X	X	A	C	C	A	AC	A	A	BC	C	X	C	
Formaldehyde (< 50%)	B	X	B	X	B	B	X	B	AC	AC	A	B	A	A	A	

See notes at end of table.

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Legend	Sheath Material															Notes	
	Aluminum	Carbon Steel	Copper	Cast Iron	INCONEL® 600	INCOLOY® 800	Lead	MONEL® 400	304, 321, 347 SS	316 SS	20Cb-3 SS	C276 Hastelloy®	Quartz	Titanium	Teflon®12		Suggest Density 12
A = Good to Excellent B = Fair to Good C = Depends on Conditions X = Not Suitable Blank = Data Not Available																	
Solution	Corrosion Rating																
Formic Acid (10 - 85%)	B	X	C	X	B	B	X	B	AC	B	A	A	A	C	A	3 - 9	
Freon (F-11, F-12, F-22)	B	C			A	A		A	A	A	A						
Fruit Juices (Pulp)	B	X			B	A		A	BC	B	A	B		A	A	30 - 40	
Fuel Oil (Normal)	B	A	B	A	B	A		B	A	A	A	B		A		6 - 15	2, 3, 7
Fuel Oil (Acid)	X	X	X	X	C	C		C	C	B	A		A			6 - 10	2, 3, 7
Gasohol	B	B	B	B	B	B		B	B	B	B	B				23 - 26	
Gasolene (Refined)	B	B	B	B	B	B		B	B	B	B	B	A			23	2, 5
Gasolene (Sour)	X	B	X	C	C	C		X	B	B	B	B	A			23	2, 3, 5
Glycerin (Glycerol)	A	B	A	B	A	A	B	A	A	A	A	A	A	A	A	23	1, 5
Grey Nickel																	
Hydrocarbons-Aliphatic	A	A	A	A	A	A		A	A	A	A	A	A	A		23 - 26	2
Hydrocarbons-Aromatic	A	A	A	A	A	A		A	A	A	A	A	A	A		23 - 26	2
Hydrochloric Acid (Dilute)	X	X	X	X	BC	BC	X	BC	X	X	X	AC	B	B	A	20 - 30	
Hydrochloric Acid (50%)	X	X	X	X	X	X	X	X	X	X	X	BC	X	X	A	15 - 25	
Hydrocyanic Acid (10%)	B	B	X	X	B	B	X	B	B	B	B		A	A	A		
Hydrofluoric Acid (Dilute)	X	X	X	X	BC	X	X	B	C	X	X	A	X	X	A	23	5
Hydrogen Peroxide (90%)	A	X	X	X	B	B	X	B	AC	AC	AC	A	A	B	A		1
Indium																	
Iridite™ - #4 - 75, #4 - 73, #14, #14 - 2, #14 - 9, #18 - P										A							1
Iridite™ - #1, #2, #3, #4-C, #4PC&S, #4P-4, #4-80, #4L-1, #4-2, #4-2A, #4-2P, #5P-1, #7, #7-P, #8, #8-P, #8-2, #12-P, #15, #17P, #18P													A				1
Iridite™ Dyes - #12L-2, #40, #80													A		A		1
Irilac™													A		A		1
Iron Fluoborate															A		1
Iron Phosphite (Parkerizing™)										A							1
Isoprep™ Deoxidizer #187, #188										A							1
Isoprep™ Cleaner #186										A							1
Isoprep™ #191 Acid Salts															A		1
Jetal™									A								1
Jet Fuel JP-4	B	B			A	A	B	B	BC	B	BC	A		A		23 - 26	2
Kerosene	B	B	BC		B	A	B	B	B	B	B	B					
Lacquer Solvents	A	A	A	A	B	B	A	B	A	A	A	B	A	A	A	23 - 26	2
Lead Acetate	X	X	X	X	A	A	X	B	A	B	A	B	A	A	A		
Lead Acid Salts									B	B	B	B					1
Lime Saturated Water	X	B	B	B	B	B	X	B	B	A	B	A	X		C	23 - 40	
Linseed Oil	B	B	B	B	B	A	B	B	A	A	A	A	A		A	10 - 15	2
Lubricating Oil	B	A	A	A	A	A	A	B	B	B	A	B	A	A		23 - 26	7
Machine Oil																23 - 26	7
Magnesium Chloride	X	BC	B	X	A	B	X	B	B	C	B	B	A	A	A		
Magnesium Hydroxide	B	A	B	B	A	B	X	B	A	A	A	A	A	A	A		
Magnesium Nitrate	B	B	B	B	B	A	X	B	B	B	B	B	A	A	A		
Magnesium Sulfate	B	BC	BC	B	AC	B	B	A	B	B	B	B	A	B	A		1
McDermid™ #629																	
Mercuric Chloride	X	X	X	X	X	X	X	X	X	B	BC	B	A	B			
Mercury	X	A	X	A	B	A	X	B	A	A	A	A	A	A			
Methyl Alcohol (Methanol)	C	B	B	B	A	A	B	A	B	A	B	A	A	A	A		2
Methyl Bromide	X	C	B	C	B	B	B	B	BC	A	A	B	A	A	A		
Methyl Chloride	X	X	B	C	B	C	B	B	AC	AC	AC	B	A	A	A		
Methylene Chloride	C	BC	C	BC	B	B	B	AC	B	B	AC	B	A	A	A		
Milk	A	B	C		A	A	X	C	A	A	A	A				30 - 40	
Mineral Oil	B	B	B		A	AC	B	A	AC	B	AC	A	A	A	A	23 - 26	

See notes at end of table.

Reference Data

Corrosion Guide for Electric Immersion Heaters *(cont'd.)*

Legend	Sheath Material														Suggest Density ¹²	Notes	
	Aluminum	Carbon Steel	Copper	Cast Iron	INCONEL® 600	INCOLOY® 800	Lead	MONEL® 400	304, 321, 347 SS	316 SS	20Cb-3 SS	C276 Hastelloy®	Quartz	Titanium			Teflon® ¹²
A = Good to Excellent B = Fair to Good C = Depends on Conditions X = Not Suitable Blank = Data Not Available																	
Solution	Corrosion Rating																
	SEE HYDROCHLORIC ACID																
Muriatic Acid	A	A	A	B	A	A	A	A	A	A	A	A	A	A	A		2
Naphtha	X	X															1
Nickel Acetate	X	X	X	X	AC	B	C	B	BC	BC	B	A	A	A	A	23	1, 5
Nickel Chloride	X	X			BC				C	C						23	1, 5
Nickel Plate-Bright																	
Nickel Plate-Dull	X	X			BC				C	C			A	B	A	23	1, 5
Nickel Plate - Watts Solution	X	X	C	X	C	C	B	C	B	B	B		A	A	A	23	1, 5
Nickel Sulphate									AC	AC	AC						
Nickel Copper Strike									AC	AC	AC						(Cyanide Free)
Nitric Acid (20%)	X	X	X	BC	BC	AC	X	X	AC	AC	A	AC	A	A	A	15	
Nitric & Hydrochloric Acid	X	X	X	X	C	X	X	X	BC	BC	C		A	X	A	15	
Nitric & 6% Phosphoric Acid																	1
Nitric & Sodium Chromate																	1
Nitric & Sulfuric Acid (50% - 50%)	X			C	X	X	X	X	AC	AC	AC					15	
Nitrobenzene	BC	B	BC	B	B	B		B	B	B	A	B	A	A	A		2
Oakite™ #67																	
Oleic Acid	C	BC	B	BC	A	AC	X	BC	AC	AC	B	B	A	AC	A	30 - 40	1
Olive Oil	AC	B	B					B	B	B	B	AC		A	A	23 - 26	
Oxalic Acid (50%)	X	X	B	X	AC	AC	X	B	B	B	B	B	A	X	A		
Paint Stripper (High Alkaline)																	
Paint Stripper (Solvent)																	
Paraffin	A	A	A	A	B	A		B	A	A	A	A				30 - 40 23 - 26 6 - 15	1 1, 2 2, 7
Parkerizing™	SEE IRON PHOSPHATE																
Peanut Oil																23 - 26	
Perchloroethylene	B	A	B	A	A	A	B	A	AC	B	B	A	A	A		23	
Petroleum Oils (Refined)	B	B	B	B	A	A		A	A	A	A		A	A		23 - 26	2, 3, 7
Petroleum Oils (Sour)	X	B	X	B				X	B	B						15 - 23	2, 3, 7
Phenol (Carbolic Acid)	B	B	X	C	A	AC	X	AC	A	A	A		A	A	A	23 - 40	1, 5, 9
Phosphates (Generic)									BC	BC			X			23 - 40	1, 5, 9
Phosphate Cleaners									BC	BC			X			23	1, 5, 9
Phosphatizing									AC	AC	AC			X		23	1, 5, 9
Phosphoric Acid (25% - 50%)	X	X	AC	X	BC	C	B	C	AC	BC	AC		A	X	A	23	5, 9
Picric Acid	BC	X	X	X	C	BC	X	X	BC	B	B	B	A		A		
Plating Solutions - Brass										B	B	B	A	A	A	23 - 35	1
Plating Solutions - Cadmium										B	AC	AC	A	A	A	23 - 35	1
Plating Solutions - Chrome (25%)	X	X	X	X	X	BC		X	BC	B	AC	AC	A	X	A	23 - 35	1
Plating Solutions - Chrome (40%)	X	X	X	X	X	X		X	BC	B	AC	AC	A	A	A	15 - 20	1
Plating Solutions - Cobalt									A				A	A	A	23 - 35	1
Plating Solutions - Copper												AC	A	AC	A	23 - 35	1
Plating Solutions - Gold (Cyanide)									AC	AC		AC	A	AC	A	15 - 20	1
Plating Solutions - Gold (Acid)													A	A	A	15 - 20	1
Plating Solutions - Nickel									AC	AC	AC	AC	A	A	A	23 - 35	1
Plating Solutions - Silver									AC	AC	AC	AC	A	A	A	23 - 35	1
Plating Solutions - Tin										C	AC	AC	A	X	A	23 - 35	1
Plating Solutions - Tin-Nickel													A	A	A	23 - 35	1
Plating Solutions - Tin-Alkaline									A				A	A	A	15 - 20	1
Plating Solutions - Zinc											AC	AC	A	A	A	23 - 35	1
Plating Solutions - Zinc Acid													A			15 - 20	1
Plating Solutions - Zinc Cyanide									A							15 - 20	1
Potassium Aluminum Sulphate	C	X	C	C	B	B		B	C	B	A	BC	A	A	A		
Potassium Bichromate	B	C	C	C						B	B	B	A	A	A		
Potassium Chloride (30%)	X	BC	X	X	AC	B	C	AC	BC	A	AC		A	AC	A		
Potassium Cyanide (30%)	X	BC	X	X	B	B	X	B	B	B	B	B	A	X	A		1
Potassium - Hydrochloric Solution	X	BC	C	X	B	B	X	B	BC	B	A	B	A	X	A		
Potassium Hydroxide (27%)	X	BC	C	X	B	B	X	B	BC	B	A	B	X	X	A		
Potassium Nitrate (80%)	A	B	BC	B	BC	B	B	B	B	B	B	B	A	A	A		
Potassium Sulphate (10%)	A	BC	BC	X	AC	BC	BC	A	A	A	A	A	A	A	A		

See notes at end of table.

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Corrosion Guide for Electric Immersion Heaters *(cont'd.)*

Legend	Sheath Material														Notes			
	Aluminum	Carbon Steel	Copper	Cast Iron	INCONEL® 600	INCOLOY® 800	Lead	MONEL® 400	304, 321, 347 SS	316 SS	20Cb-3 SS	C276 Hastelloy®	Quartz	Titanium		Teflon®12	Suggest Density 12	
A = Good to Excellent B = Fair to Good C = Depends on Conditions X = Not Suitable Blank = Data Not Available																		
Solution	Corrosion Rating																	
Reynolds Brightener														A		A		1
Rhodium Hydroxide														A		A		1
Rochelle Salt - Cyanide		A							A									1
Ruthenium Plating														A		A		1
Silicon Oils	BC	B	AC						B	B				A		A	23 - 26	
Silver Bromide (10%)	X	X	X	X		AC		C	X	X	C	AC	A	A	A			
Silver Cyanide	X	C	X	C		AC		BC	AC	AC	AC	AC	A	A	A			
Silver Lume									A	B								1
Silver Nitrate	X	X	X	X	BC	BC	X	X	B	AC	B	AC	A	AC	A			
Soap Solutions	B	BC	BC	C	AC	AC	X	BC	BC	BC	BC	AC					55	3
Sodium-Liquid Metal	X	C	X	X	A	A	X	B	AC	A			X					
Sodium Bichromate (Neutral)	C	B	C	A	B	B			B	B	B		A	C	A			
Sodium Bisulphate	X	C	X	X	BC	BC	C	BC	BC	BC	BC	B	A	BC	A			
Sodium Bromide (10%)	X	C	C	X	B	B		B	C	BC	B	B	A	C	A			
Sodium Carbonate	X	C	BC	C	A	AC	X	A	BC	B	AC	AC	C	A	A			
Sodium Chlorate	B	X	BC	X	A	AC	B	AC	BC	B	B	A	A	A	A			
Sodium Chloride	X	C	B	X	AC	A	B	AC	C	C	C	B	A	A	A			11
Sodium Citrate	X	X	X	X	AC	AC	X	B	BC	B	A	BC	A	A	A			
Sodium Cyanide	X	X	X	B	BC	BC	X	X	AC	B	A	BC	A	C	A		30 - 40	
Sodium Dichromate (Hot Seal)	B	BC	X						BC	BC	BC	AC	A	A	A			1
Sodium Hydroxide (50%)	X	C	X	C	AC	B	X	AC	AC	AC	AC	AC	X	AC	A		15	6, 8
Sodium Hypochlorite (20%)	X	X	X	X	X	X	X	X	X	X	C	X	A	A	A		20	
Sodium Nitrate	AC	B	C	B	A	A	X	BC	AC	AC	AC	BC	A	AC	A		23	5
Sodium Peroxide (10%)	B	BC	X	C	BC	B	X	B	BC	B	BC	B	C	A	A			
Sodium Phosphate (Neutral)	X	B	B	B	B	B		B	B	B	B	B	A	B	A			
Sodium Salicylate		B	B	C	B	B		B	B	B	B	B	A		A			
Sodium Silicate	C	B	X	B	B	AC	X	A	BC	B	B	B	A	A	A			4
Sodium Sulfate	AC	B	BC	X	B	AC	X	BC	AC	A	B	B	A	C	A			
Sodium Sulfide (< 50%)	X	X	X	X	B	AC	X	B	BC	BC	BC	B	C	C	A			
Sodium Stannate		C	C	C	B	B		B	B	B	B	B	A	A	A			
Sodium Thiosulfate (Hypo)	C	X	X	C	B	B		BC	B	B	BC	BC	A	AC	A			
Solder Bath	X	X	X	B	X	X	X	X	X	X	X	X	X	X	X			4
Steam (Medium Pressure)		C	BC		A	A		AC	BC	BC	BC	B					10 - 15	
Stearic Acid	B	C	BC	C	B	AC	X	C	BC	A	B	A	A	A	A			7
Sugar Solution	A	A	A	A	A	A	X	A	A	A	A	A	A	A	A			1
Sulfamate Nickel																		
Sulfamic Acid	X	X	C	X					BC		BC		A	AC	A			
Sulfur	A	X	X	X	A	A	X	BC	A	A	A	A	A	A	A			
Sulfur Chloride (Dry)	X	X	X	X	B	AC	C	X	BC	B	BC	B	A	A	A			
Sulfur Dioxide (Dry)	C	AC	BC	C	B	AC	B	B	B	B	B	B	A	A	A			
Sulfur Dioxide (Wet)	X	X	X	X	X	BC	BC	X	X	B	BC	AC	A	A	A			15 - 23
Sulfuric Acid (10% - 50%)	X	X	X	X	X	BC	A	X	X	X	X	AC	A	X	A		10 - 20	
Sulfuric Acid (98%)	X	X	X	X	X	BC	A	X	X	BC	AC	AC	A	X	A		15	
Sulfurous Acid	C	X	X	X	BC	A	A	X	X	BC	B	B	A	A	A			
Tannic Acid	X	X	C	X	B	B	X	B	B	B	B	B	A	AC	A			
Tin (Molten)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			4
Trichloroethane	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
Trichlorethylene	AC	BC	BC	A	AC	AC	X	A	B	B	B	A	A	A	A			23
Triethylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			23
Trioxide (Pickle)																		
Trisodium Phosphate	X	BC	BC	A			X	BC	AC	AC	AC	AC	X		A			1
Turco™ 4181 (Alkaline Cleaner)																		1
Turco™ 4008 (Descaler)										A							23	1, 5
Turco™ 4338 (Oxidizer)										A								1, 7
Turco™ Ultrasonic Solution										A								1
Ubac™																		1
Udylite™ #66													A					1
Unichrome™ CR-110													A	A	A			1, 5
Unichrome™ 5RHS													A	A	A			1

See notes at end of table.

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Legend	Sheath Material													Notes			
	Aluminum	Carbon Steel	Copper	Cast Iron	INCONEL® 600	INCOLOY® 800	Lead	MONEL® 400	304, 321, 347 SS	316 SS	20Cb-3 SS	C276 Hastelloy®	Quartz		Titanium	Teflon®12	Suggest Density 12
A = Good to Excellent B = Fair to Good C = Depends on Conditions X = Not Suitable Blank = Data Not Available																	
Solution	Corrosion Rating																
Vegetable Oil	B	B	BC		B	A		B	B	B	A	AC				23 - 26	
Water, Deionized	X	X	X	X	A	A		B	A	A	A	B				50 - 75	10
Water, Demineralized	X	X	X	X	A	A		C	A	A	A	B				50 - 75	10
Water, Pure (Distilled)	X	X	X	X	A	A		A	A	A	A	A				50 - 75	10
Water, Process	C	X	B		A	A		A	BC	BC	A	B	A	A	A	50 - 75	10, 11
Water, Potable	C	X	B		A	A		B	BC	BC	A	B	A	A	A	50 - 75	10, 11
Water, Salt Brine	X	X	BC		AC	AC		B	C	BC	A	A	A	A	A	55	10, 11
Water, Sea	X	X	BC	X	BC	AC		A	C	BC	BC	AC	A	A	A	55	10, 11
Watts Nickel Strike																	1
Whiskey	X	X	BC		B			A	A	A	B	AC				55	2
Wines	X	X	BC					B	A	A	B	A				55	
Wood's Nickel Strike													A				1
Yellow Dichromate													A				1
Zinc (Molten)	X		X		X	X	X	X	X	X	X	B		X	X		
Zinc Chloride	X	X	X	X	B	BC	X	BC	X	X	B	B	A	B	A		
Zinc Phosphate																	
Zincate™		A							A							23	1, 5
Actane™ - Ethone Inc. Alcoa™ - Aluminum Company of America Alcorite™ - Fredrick Gumm Chemical Co. Alodine™ - Amchem Products Inc. ARP™ - Allied-Kelite Products Div. Bonderizing™ - Parker Div. OMI Corp. Clorox™ - The Clorox Co. Diversey™ - Diversey Chemical Co. Dowtherm™ - Dow Chemical Co. Dur-Nu™ The Duriron Co., Inc. Iridite™ - Allied-Kelite Products Div. Irilac™ - Allied-Kelite Products Div. Isoprep™ - Allied-Kelite Products Div. Jetal™ - Technic Inc. MacDermid™ - MacDermid, Inc. Oakite™ - Oakite Products Inc. Parkerizing™ - Parker Div. OMI Corp. Turco™ - Turco Products Div., Purex Corp. Ubac™ - The Udylyte Co., OMI Corp. Udylyte™ - The Udylyte Co., OMI Corp. Unichrome™ - M & T Chemicals Inc. Zincate™ - Ashland Chemical																	
Notes —																	
1. This solution is a mixture of various chemical compounds or is a proprietary trade name whose identity and proportions are unknown or subject to change without our knowledge. Check the chemical supplier or manufacturer to confirm the choice of sheath material or alternate sheath materials that may be suitable.																	
2. CAUTION — Flammable material.																	
3. Chemical composition varies widely. Contact the chemical supplier for specific recommendations.																	
4. Direct immersion heaters are usually not practical. Recommend using clamp-on heaters on the outside surface of a cast iron pot.																	
5. Element surface loading should not exceed 23 watts per square inch.																	
6. For concentrations greater than 15%, element surface loading should not exceed 15 watts per square inch.																	
7. Concentrations vary widely. See suggested watt density chart or contact your Local Chromalox Sales office.																	
8. Remove crusts at liquid level.																	
9. Clean often.																	
10. Passivate stainless steel for maximum corrosion resistance.																	
11. Stainless steel materials may be subject to chloride or stress corrosion cracking in this environment.																	
12. Suggested watt densities do not apply to Teflon® coated heaters. Lower watt densities may be required.																	