

Table I. Formulations for Stripping Metallic Coatings (cont.)

Deposit Stripped	Base Metal	Ingredients	Temperature (°F)	Volts	Cathode	Comments
	Copper alloys or steel	Acetic acid Hydrogen peroxide	Room			Solution is less corrosive than fluoboric acid solution. Solution does not have the acid odor of an acetic acid solution.
	Copper alloys or steel	Fluoboric acid	Room			
Steel	Steel	Hydrogen peroxide	150	6	Steel	Work is anodic.
		Sodium hydroxide				
		o-nitrobenzoic acid				
		Sodium hydroxide				
Steel	Steel	Sodium metasilicate	180	6	Steel	Work is anodic.
		Rochelle salts				
Nickel	Aluminum, brass, copper, steel, or zinc die castings	Sulfuric acid	Room	6	Lead	Work is anodic. Stripping rate is increased by adding more water, but this also increases tendency to pit. 30 g/L (4.0 oz/gal) of copper sulfate or glycerine is added to reduce pitting of steel.
Brass or copper	Brass or copper	Sulfuric acid	150 maximum			
		m-nitrobenzene sulfonic acid				
Brass or copper	Brass or copper	Sulfuric acid	120			Keep work dry before entering bath. Nitric acid additions reactivate the bath.
		Nitric acid				
Magnesium	Magnesium	Ammonium bifluoride	Room	6	Lead	Work is anodic.
		Sodium nitrate				
Steel	Steel	Sodium cyanide	150 maximum			
		Sodium hydroxide				
		m-nitrobenzene sulfonic acid				

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Nickel-phosphorus (electroless nickel)	Zinc die castings	Sulfuric acid Phosphoric acid Chromic acid	175 maximum	6	Lead	Work is anodic.
	Brass, copper, or steel	Sodium hydroxide Ethylenediamine m-nitrobenzene sulfonic acid	170			
Oxide-anodized coatings	Aluminum	Nitric acid Ammonium bifluoride	Room			
	Aluminum Magnesium	Phosphoric acid Chromic acid Chromic acid	180-212 120-160			
Black oxide	Steel	Hydrochloric acid, inhibited	Room			
Palladium	Brass, copper, silver, or steel	Sodium chloride Hydrochloric acid	Room	2-4		Work is anodic.
Phosphate Mn-type	Steel	Chromic acid	165			
Mn-type and Zn-type	Steel	Sodium hydroxide Sodium cyanide Sodium ethylene diamine tetra acetic acid (EDTA)	160	6		Work is anodic.

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Platinum	Nickel or steel	Hydrochloric acid	Room			Solution is unstable and must be mixed fresh for each part stripped.
		Nitric acid				
Rhodium	Nickel-plated brass	Sulfuric acid	90-100	7		Work is anodic. Nickel undercoat is dissolved and rhodium falls off.
		Hydrochloric acid	Room	6		Work is anodic. Agitate work to prevent pitting.
Silver	Silver-plated copper alloys	Sulfuric acid	120			Keep work dry before entering bath. Nitric acid additions reactivate the bath.
		Nitric acid				
	Aluminum	Room	3	Lead	Work is anodic.	
	Brass or copper	70-120				
Silver	Brass, copper, or nickel-silver	Sulfuric acid, conc.	180			Keep work dry before entering bath. Nitric acid additions reactivate the bath. Use with care, as base metal may be attacked.
		Sodium nitrate				
Silver	Brass, copper, or nickel-silver	Sulfuric acid	180			Keep work dry before entering bath. Nitric acid additions reactivate the bath. Use with care, as base metal may be attacked.
		Nitric acid				
Nickel or steel	Nickel or steel	Sodium cyanide	Room	6	Steel	Work is anodic. Use 2V for prolonged treatment, as high voltage may pit steel. For nickel: reactivate the nickel by cathodic treatment in hydrochloric acid prior to replating.
		Sodium hydroxide				
Tin	Aluminum	Nitric acid, conc.	Room	6	Steel	Work is anodic. Base metal may be attacked at high temperatures.
		Sodium hydroxide	70-170			
Tin	Copper or copper alloys	Sulfuric acid	Room			
		Hydrogen peroxide				

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	Steel	Sodium hydroxide Sodium thiosulfate	100			
		99.8 g/L (13.3 oz/gal) 99.8 b/L (13.3 oz/gal)				
Tin-nickel	Copper alloys Steel	Hydrochloric acid Sulfuric acid	Room Room	6 6	Carbon Lead	Work is anodic. Work is anodic.
		250.0 ml/L (32.0 fl oz/gal) 600.0 ml/L (76.8 fl oz/gal)				
Zinc	Aluminum Brass, copper, or steel Copper alloys or steel	Nitric acid, conc. Sodium hydroxide Hydrochloric acid, inhibited	Room Room 120	4	Steel	Work is anodic.
	Copper alloys or steel	Ammonium nitrate	Room			
		150.0 g/L (20.0 oz/gal)				