



PRODUCT INFORMATION

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EMERGENCY - MARTRON 704-289-1934
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REF. # MFC-005700

MARTRON CADMIUM 7791

A LIQUID ADDITION AGENT FOR CYANIDE CADMIUM PLATING

Section 1: DESCRIPTION

Martron Cadmium 7791 is a liquid addition agent for cyanide cadmium plating specifically designed to produce brilliant, extremely fine-grained metal deposits over a wide current density range.

Martron Cadmium 7791 significantly improves the throwing power and high current density covering power of the cadmium plating solution.

Martron Cadmium 7791 will provide uniform brightness over a wide range of operating current densities and therefore is suitable for use in both rack and barrel plating applications.

Martron Cadmium 7791 has long operating life and provides for low cost bath operation.

Martron Cadmium 7791 will operate over a wide range of bath compositions with outstanding throwing power and high current density brightness.

Martron Cadmium 7791 readily accepts all types of post treatments and chromate conversion coatings.

Section 2: TYPICAL OPERATING CONDITIONS

	RACK	BARREL
Cadmium Metal	2.0 - 4.5 oz/gal	1.0 - 3.0 oz/gal
Sodium Cyanide	12 - 20 oz/gal	10 - 18 oz/gal
Caustic Soda	1.0 - 2.5 oz/gal	1.0 - 3.0 oz/gal
Sodium Carbonate	4.0 - 10.0 oz/gal	4.0 - 10.0 oz/gal
Temperature	70 - 95°F	70 - 95°F
Voltage	3 - 6 volts	9 - 15 volts
Martron Cadmium 7791	0.75 - 1.25% by volume	0.75 - 1.25% by volume

Excessive amounts of **Martron Cadmium 7791** have no detrimental effect on the plated work, other than to increase the cost of operation. Low concentration of addition agent may result in decreased brightness, burning in the high current density areas, and reduced throwing power.

No analytical control is necessary for the **Martron Cadmium 7791**. Visual inspection of the plating work is usually all that is required. Hull cell testing can also be useful and instructive. Bath chemistry should be checked periodically by simple titration method to assure proper chemical balance.

Martron Zinc Purifier can be used to precipitate many heavy metal impurities in the cadmium plating bath with the exception of copper. Typical additions would be 0.01% by volume. The purifier should be diluted at least 20:1 with water before adding to the plating tank.

Section 3: CADMIUM PLATING TROUBLESHOOTING GUIDE

Problem:	Appearance:	Corrective Action:
High Cadmium Metal	Dull LCD, Poor Throw	Dilute Bath, Reduce Anode
Low Cadmium Metal	Dullness, Burn in LCD	Increase Metal/Anode Area
High Cyanide	Slight Haze in LCD	Stop Cyanide Additions
Low Cyanide	Dull LCD, Poor Throw, Cad Metal Decreases	Add Cyanide
High Caustic	Dull LCD, Low Brightness	Stop Additions
Low Caustic	Anodes Polarize, Cad Metal Decreases, Staining	Add Caustic
Low Brightener	Dullness, Burning	Add Addition Agent
Burn in HCD	Low Brightener	Add Brightener
Hex Chrome	Blistered Deposit	Add Hydrosulfite
High Carbonates	Dull Rough Deposit, Loss of plating deposit efficiency	Freeze Out
Cu Contamination	Black Deposit After BD	Zn Dust, Dummy

Martron Cadmium 7791 is considered an industrial chemical and contains nickel salts. Care should be taken when handling this product. Rubber gloves and safety glasses should be worn. Please store in warm environment and do not freeze. Store away from oxidizing materials.

Section 4: SAFETY PRECAUTIONS

Always read the Safety Data Sheet (SDS) for any chemical product to ensure familiarity with the methods of safe handling and the health hazards associated with the product.

Section 5: NON-WARRANTY

The data contained in this bulletin is believed by **Martron Inc.** to be true, accurate and complete. Since, however, final methods of use of this product are in the hands of the customer and beyond our control, we cannot guarantee that the customer will obtain the results described in this bulletin, nor can we assume any responsibility for the use of this product by the customer in any process which may infringe the patents of third parties.