



## PLATING SHEEN CHEM (INDIA) PVT. LTD.

EXCELLENCE IN METAL FINISHING

[www.pcichemicals.com](http://www.pcichemicals.com)

### ULTRASTRIP CR 10

**ULTRASTRIP CR 10** is a two part system- **CR 10** AND **CR 10 X** developed by PCI to strip Chromium electrolytically, and which also effectively cleans lead anodes used in the chromium plating tank by reducing lead compounds to metallic lead.

**ULTRASTRIP CR 10** is also effective in the case of certain cast irons which have given adherence trouble in chromium plating.

**ULTRASTRIP CR 10** uniformly strips electroplated chromium. The Chromium plated work to be stripped is made anodic in the ULTRASTRIP solution and the stripping continued until the required removal of Chromium is completed. Special racking facilities are not generally required. However, where conforming anodes have been necessary in plating, the stripping time will be shortened if similar conforming cathodes are used in stripping.

#### OPERATING CONDITIONS FOR STRIPPING CHROMIUM

|                  |   |  |
|------------------|---|--|
| Temperature      | : | 40° C to 65° C                           |
| Voltage          | : | 9 to 12 volts                            |
| Current density  | : | 300 to 600 amps/sq.ft.                   |
| Solution density | : | 20 <sup>0</sup> to 30 <sup>0</sup> Baume |
| pH               | : | 10.5 to 13.0                             |

A temperature of 50<sup>0</sup>C is recommended. Increasing the temperature increases the stripping rate, but excessive temperature unduly shortens the life of the bath.

The voltage and current at 9 to 12 volts is preferred and recommended. Lower voltages can be used where necessary, with lower stripping rates resulting.



## *ULTRASTRIP CR 10*

### SOLUTION MAKE UP

The make up of the solution for surface conditioning, stripping chromium or cleaning lead anodes is 240 gms/lit ULTRASTRIP CR 10. The solution is prepared by dissolving the ULTRASTRIP CR 10 in the tank about two-thirds full of warm water (about 40° C) and then adding water to bring the solution up to the working volume.

### MAINTENANCE

The pH of the solution should be checked periodically and maintained with additions of ULTRASTRIP CR 10 X in the range between 9 and 13.0. The pH value tends to fall during stripping operations. Additions of ULTRASTRIP CR 10 X will raise the pH. After pH adjustments the density of the solution should be determined and maintained between 20<sup>0</sup> and 30<sup>0</sup> Bu with regular additions of ULTRASTRIP CR 10.

ULTRASTRIP CR 10 is used for make-up and maintenance of the solution.

ULTRASTRIP CR 10 X is used for pH adjustment

### EQUIPMENT

A steel tank is recommended; a brick line or rubberised steel tank is also satisfactory. A lead-lined or wooden tank should not be used.

The tank is equipped with a steel temperature control coil, copper work rods and steel electrodes which may be connected either as anode for cleaning lead anodes or cathode for stripping. The tank should be ventilated.

While work may be stripped on the same rack as that on which it was chromium plated, the stripping solution dissolves copper and copper alloys. Where attack upon copper in the plating rack may be objectionable, nickel-plated racks, iron wire, or steel racks should be used to support the work during stripping. As with any stripping operation care must be exercised to prevent drag in of the contaminant laden stripping solution into the plating solutions.

Adequate rinsing to insure complete removal of the ULTRASTRIP CR 10 solution must be provided.

## ***ULTRASTRIP CR 10***

### **ULTRASTRIP CR 10 FOR CLEANING LEAD ANODES**

The lead alloy anode to be cleaned is connected at cathode (the negative electrode) in the ULTRASTRIP CR 10 solution, made up as given as below with the steel electrodes connected as anode. The lead alloy anodes are electrolysed until the gassing which starts at corners and edges spreads over the entire anode surface and becomes constant. The time varies with the thickness of the coating being removed. Most anodes can be cleaned in from 1 to 20 minutes.

The anode is removed from the solution, rinsed in water and brushed or wiped with a rag while wet to remove the film of loose, spongy lead on the surface. It is then ready for use in the chromium bath.

### **OPERATING CONDITIONS**

|                  |  |
|------------------|--|
| Temperature      | : 25 <sup>0</sup> C to 65 <sup>0</sup> C |
| Voltage          | : approx. 6 volts                        |
| Current density  | : 10 to 20 amps/dm <sup>2</sup>          |
| Solution density | : 20 <sup>0</sup> to 30 <sup>0</sup> Bu  |
| PH               | : 10.5 to 13.0                           |

Any convenient temperature may be used. If the solution is also being used to strip chromium a temperature of 50<sup>0</sup> C is recommended. If it is only being used to clean anodes, room temperature is satisfactory. Increasing the temperature slightly increases the cleaning rate.

### **CONTAMINATION**

Care must be exercised to prevent drag in of chloride into the ULTRASTRIP CR 10 solution. Chloride contamination of this ULTRASTRIP CR 10 solution causes etching of ferrous basis metals during chromium stripping operations or as in the case of cast iron, when the works being anodically surface treated.

It is also essential that adequate rinsing be provided after the ULTRASTRIP CR 10 solution so that it will not be dragged into plating solutions.

If the ULTRASTRIP CR 10 solution is to be used for various purposes such as cleaning anodes, cleaning metal prior to plating, and stripping chromium, it is suggested that a separate ULTRASTRIP CR 10 solution be provided for each purpose. This will avoid the possibility of one use setting up conditions, which might be injurious to another



## ULTRASTRIP CR 10

### ULTRASTRIP CR 10 FOR SURFACE CONDITIONING

After scale, rust and grease have been removed from steel and cast iron by the usual cleaning treatments, films sometimes remain on the surface and cause poor adherence of the subsequent electroplate. Anodic treatment in the ULTRASTRIP CR 10 solution removes the last trace of these films and leaves a fresh, smooth surface of metal.

#### **Cast Iron conditioning prior to Chromium plating:**

The surface conditioning action of ULTRASTRIP CR 10 solution has proved effective in the case of certain cast irons which have given adherence trouble in chromium plating. After the usual cleaning treatment, the cast iron is electrolysed as anode in the ULTRASTRIP CR 10 solution made up as given above. The voltage ranges from 9 to 12 volts and the current density from 300 to 600 ASF. The temperature is usually between 45<sup>0</sup> to 60<sup>0</sup> C and the time of treatment ranges from 5 to 20 minutes. The pH should be maintained between 9 and 11. Thorough rinsing of the work prior to introduction into the chromium plating solution is necessary.

In case of ULTRASTRIP CR 10 solutions coming in contact with the eyes, wash immediately with water for at least 15 minutes and consult a physician. Remove soaked clothing immediately and wash affected skin with plenty of water.

Use only in well ventilated areas. INSTALL EYE WASHER AND SAFETY SHOWER IN HANDLING PLACE.

NOTES :

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Further Technical Assistance & MSDS can be sought from PCI, any time.

DISCLAIMER : The data in this leaflet corresponds to our latest knowledge. However, it is not possible to derive any liability there from. Each processor will be himself liable for observation of all regulations, for suitability in a particular application or in matters of legislation or patent law.

*Manufactured By :*

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