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## CL MP-308 (MICRO POROUS NICKEL)

### Properties

CL MP-308 process serves to improve the corrosion resistance in the nickel – chrome system range. The increased corrosion protection is achieved by formation of a micro porous structure in the chrome layer. This is achieved by deposition of a thin nickel layer from the CL MP-308 process. The porosity in the chrome layer caused by the CL MP-308 process is depending on the deposit thickness of the chrome layer.

0.25 micrometer chrome show approx. 40.000 pores/cm. By 0.50 micrometer approx. 20.0000 pores can be found.

### Make-up per ltr. electrolyte

Nickel sulphate hexahydrate	260 – 340 g/l
Nickel chloride hexahydrate	50 - 80 g/l
Boric acid	40 - 45 g/l
Brightener MP 311	4,0 – 6,0 ml/l
Brightener MP 333	10,0 – 20 ml/l
Additive MP 308	2 – 4 g/l
Additive MP 308 B	2,0 – 4,0 ml/l
Additive MP 366	0.5 – 1,0 ml/l

### Working conditions

Bath density	22 – 24 ° Be
Temperature	50 – 60 °C
pH value	3,8 – 4,2
Current density	Cathodic 3 - 6 A/dm <sup>2</sup> Anodic 1.5 – 3 A/dm <sup>2</sup>
Voltage	3 – 9 Volt.
pH value	4.4 – 4.8
Anodes	electrolytical nickel anodes, titanium baskets and anode bags
Filtration	not continuously
Air agitation	oil- and dust-free air, 15 cubic meter/hr, per m <sup>2</sup> electrolyte surface
Plating time	2 – 3 minutes.

Bankverbindung : Stadt – Sparkasse Solingen, BLZ 342 500 00, Konto nr. 5353248  
HRB 5025 Amtsgericht Solingen. Ust-ID-Nr. DE 813 359 241  
Geschäftsführer : Uwe Lüttke

## **Tank material**

Hard rubber lined steel tanks, GFK tanks, PVC tanks. A suction device is necessary.

## **Make-up**

After the dissolving of the salts and cleaning of the electrolyte (Active carbon treatment and dummy plating) the addition of the additive can take place in subsequent order:

MP 311  
MP 333  
MP 308  
MP 308 B  
MP 366

## **Standard working sequence**

Semi-bright nickel  
Bright nickel  
Micro porous nickel (by mechanical moved nickel electrolytes we recommended an in between rinse).  
Rinse  
Rinse  
Bright chrome

## **Function of the additives as well as its consumption**

MP 311 is a so called secondary Brightener. The consumption lies between 0.2 – 0.4 l/1000 Ah.

MP 333 is a Brightener. The consumption lies between 0.1 – 0.2 l./1000 Ah .

MP 308 is a solid additive . The consumption lies between 50 – 150 g/1000 Ah.

MP 308 B is a Wetting Agent. The consumption lies by approx.. 0.1 l./1000 Ah.

MP 366 is a Dispersion Carrier. He consumption lies between 0.1 – 0.2 l./1000 Ah.

## **WARRANTY**

Seller makes no warranty, whether of merchantability, fitness or otherwise, expressed or implied, concerning the product other than it shall be of the specifications stated herein. Any recommendations made by Seller concerning the use of the product are believed to be reliable, but seller makes no warranty of the results obtained. Buyer agrees to inspect the product supplied hereunder immediately after delivery. Failure to give notice in writing as aforesaid within the specified time constitutes an unqualified acceptance of the product and a waiver of all claims with respect thereto.