

Chrome Electrolytes

A perfect finish for much better products.

trivalent, hexavalent and
bright chrome processes

technical chrome processes



SLOTOCHROM DR 60

Cr(III)

Bright Chrome SLOTOCHROM DR 60 is an electrolyte for decorative chrome layers. SLOTOCHROM DR 60 is free from hexavalent chromic acid and operates on the basis of chromium(III) compounds. As a result, Environmental and Employment Protection as well as effluent treatment are improved considerably. Bright Chrome SLOTOCHROM DR 60 is sulphate based and is free from ammonium. Bright Chrome SLOTOCHROM DR 60 coatings are light and very close in appearance to those provided by conventional electrolytes. The metal distribution, coverage and throwing power of Bright Chrome SLOTOCHROM DR 60 is superior to conventional electrolytes based on chromic acid. That means a substantially equal metal distribution. The electrolyte is resistant to burnings in high current density areas. The superior throwing and covering power of this electrolyte means that auxiliary anodes and blends are seldom needed even with parts with a complicated part geometry. Unlike conventional chrome electrolytes there's no need to close drill holes or other perforations with a plug if parts are going to be chrome plated.



Concentrations and operating conditions

	Range	Optimum
Conducting Salt SLOTOCHROM DR 61 g/l	185-210	195
pH range	3,3-3,9	3,7
Operating temperature °C	45-55	50
Cathodic current density A/dm ²	4-8	5
Deposition rate µm/min	0,05 at 5 A/dm ²	



SLOTOCHROM 50

Cr(III)

Concentrations and operating conditions

	Range	Optimum
Conducting Salt SLOTOCHROM DR 53 g/l	230-370	250
pH range	2,5-2,8	2,6
Operating temperature °C	30-35	32
Cathodic current density A/dm ²	10-20	15
Deposition rate µm/min	0,1 at 15 A/dm ²	

Bright Chrome SLOTOCHROM 50 deposits light decorative chrome layers and doesn't contain any chromic acid. The process is based on chloride and chromium(III) compounds. Metal distribution and coverage of Bright Chrome SLOTOCHROM 50 is superior to conventional chromic acid based electrolytes. The electrolyte is resistant to burnings in high current density areas. Auxiliary anodes and blends are seldom needed even if parts with complicated geometry are plated. There is no need to close drill holes or other perforations with a plug if parts are going to be chrome plated. The additives of Bright Chrome SLOTOCHROM 50 are free of AOX.

SLOTOCHROM DC 150

Cr(VI)

Bright Chrome SLOTOCHROM DC 150 is an easy to maintain chrome electrolyte with a variable chromic acid content. Trouble-free deposition is possible with a chromic acid content of only 150 g/l.

If desired, a 300 g/l chromic acid content may be used without any problems. The components can be easily monitored analytically. Conventional chrome electrolytes can be easily converted to SLOTOCHROM DC 150.



Concentrations and operating conditions

	Range	Optimum
Chromic acid g/l	125 - 300	150
Chromium (III) oxide g/l	2 - 6	3
Sulphuric acid g/l	0,5 - 1,95	0,75
Operating temperature °C	40 - 50	45
Cathodic current density A/dm ²	10 - 25	15
Deposition rate µm/min	0,12 at 15 A/dm ²	

SLOTOCHROM 70

Cr(VI)

Black Chrome SLOTOCHROM 70 deposits uniform and decorative black chrome coatings for technical applications, e.g. solar technology and optical industry. A good throwing power, minimal soot formation, easy operation, high bath stability and short plating times are the features of Black Chrome SLOTOCHROM 70. The black chrome layers are uniform black, light-insensitive and may also be applied at higher temperatures due to the good thermal stability. The micro-porosity of the black chrome layers is responsible for the excellent abrasion and corrosion resistance.

Concentrations and operating conditions

	Range	Optimum
Chromic acid g/l	300 - 500	450
Content of Cr(III) g/l	4 - 15	7,5
Operating temperature °C	13 - 24	18
Cathodic current density A/dm ²	5 - 40	20
Deposition rate µm/min	0,5 at 20 A/dm ²	

The reflexion of the black chrome coatings is approx. 94 % less than normal chrome layers. Post-treatment of the black chrome layers with wax, oil or clear lacquer improves reflectivity and blackness.

SLOTOCHROM S

Cr(VI)

Concentrations and operating conditions

	Range	Optimum
Chromic acid g/l	200 - 250	220
Sulphuric acid g/l	1,0 - 1,75	1,38
Operating temperature °C	50 - 58	54
Cathodic current density A/dm ²	30 - 70	50
Deposition rate µm/min	0,1 at 50 A/dm ²	

Hard Chrome SLOTOCHROM S is a mixed-acid based electrolyte containing fluoride. Easy maintenance, no sediments and high deposition rates are the features of this electrolyte. Chromic acid, minimal sulphuric acid and Hard Chrome Additive S 1 are used for make-up. The latter can be analysed, making the solution very easy to monitor.

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