

# CONSOL STAR

## BRIGHT NICKEL SERIES

STAR

SUPER-STAR

ROTO-STAR

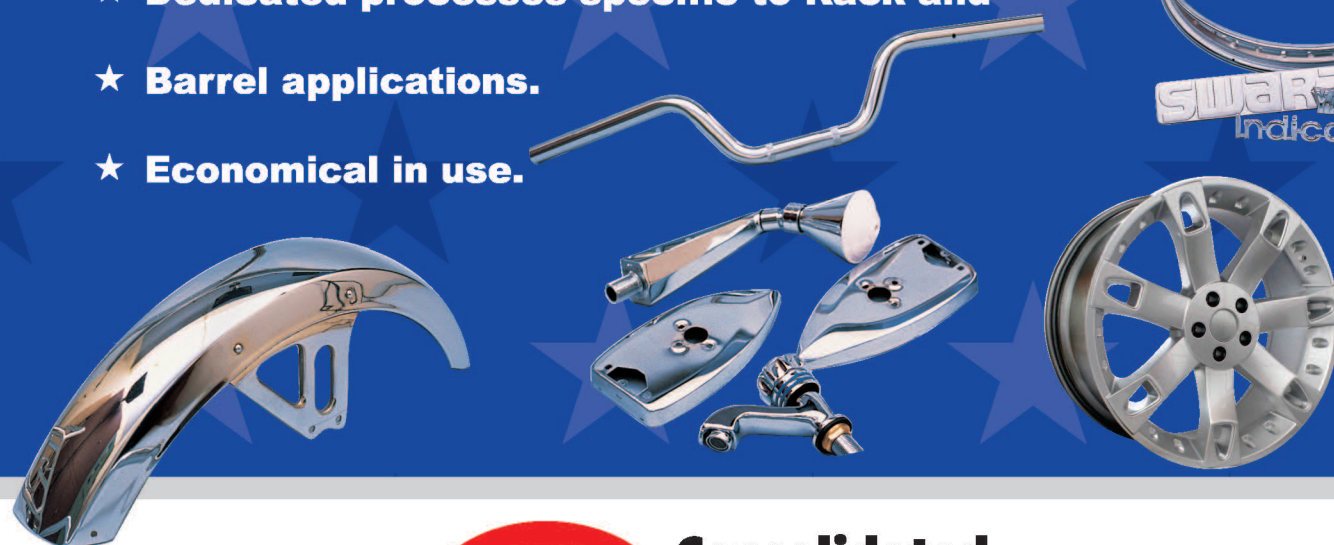
SOLO-STAR

DELTA-STAR

STAR-REVOLUTION



- ★ Break through advanced Bright Nickel technology.
- ★ Quick, Bright, Ductile, Leveled deposits.
- ★ High molecular, Long chain, Low TOC stable chemistry.
- ★ Low organic degradation products in solution.
- ★ White active receptive Nickel deposits. No Yellowing.
- ★ Low porosity. High corrosion resistance.
- ★ Dedicated processes specific to Rack and Barrel applications.
- ★ Economical in use.



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## **FEATURES AND BENEFITS**

# **CONSOL STAR**

### **(HIGH SPEED QUICK LEVELLING RACK NICKEL PLATING SYSTEM)**

- ◆ **Consol Star** Bright Nickel, a Fifth Generation Organic System makes it possible to obtain superbly levelled, extremely ductile, bright reflective Nickel finishes over a wide variety of base metals such as Steel, Brass, Copper, Zincated aluminum. ABS plastics and white metal.
- ◆ Applications range from Automotive two and four wheeler, hardware, jewelry, tubular and hollow articles, giftware & over a wide range of conventional and specialized applications.
- ◆ **Consol Star** is the ideal Topcoat of Nickel in a Duplex or Tri-Nickel application with very low porosity making for superior corrosion resistance.
- ◆ Nickel deposits are active and readily accept a wide variety of plated deposits such as Chrome, Gold, Silver, Rhodium, Black nickel, Pearl Nickel and alloy coats.

#### **SOLUTION MAKE-UP COMPOSITION:**

	<b>RANGE</b>	<b>OPTIMUM</b>
<b>Consol Star Bright Nickel Salt</b>	350 – 400 g/l	375 g/l
<b>Consol Star Composite – 1</b>	7.5 – 12.0 cc/l	10.0 cc/l

#### **OPERATING CONDITIONS:**

	<b>RANGE</b>	<b>OPTIMUM</b>
Nickel as Metal	56 – 65 g/l	59 g/l
Boric Acid	40 – 45 g/l	42 g/l
Nickel Chloride	55 – 70 g/l	60 g/l
pH	4.2 – 5.0	4.6
Temperature	49 – 60°C	57°C
Cathode Current Density	1.0 – 8.0 A/dm <sup>2</sup>	4.0 A/dm <sup>2</sup>
Anode Current Density	1.0 – 4.0 A/dm <sup>2</sup>	2.0 A/dm <sup>2</sup>
Bath Voltage	3.5 – 6.0 V	5.0 V
Agitation	<b>Cathode Rod Movement / Air</b>	
Filtration	Continuous	

#### **REPLENISHMENT:**

<b>Consol Star Carrier – 2</b>	75 – 125 cc / KAH
<b>Consol Star Brightener – 3</b>	100 – 150 cc / KAH
<b>Consol Star Bright Nickel Salt</b>	10 g/l = Ni Metal: 1.62 g/l ; Boric Acid: 1.25 g/l ; Chloride: 0.75 g/l

**Consol Star Composite – 1** is used to make up new solutions. Slide conversion of operating solutions requires 1-3 cc/lit. After oxidation or Carbon Purification Treatment 1-3 cc/lit is added. **Not used for regular addition.**

Attention: This sheet is only meant to provide Features and Benefits of the process mentioned. For detailed Usage, Please refer the product Technical Data Sheet. For Safety, handling and Chemical information please refer the Safety Data Sheet. These can be provided through a Consolidated Metal Finishing Pvt. Ltd. representatives or requesting us for the same by email.