

COVENTYA 



# LANTHANE Yellow 335

The Friendly Expertise 



# LANTHANE Yellow 335



**Dye-Free, Cr<sup>+3</sup> Yellow Passivate for all Zinc Deposits**



## Process Characteristics

- Cr<sup>+6</sup> Free
- Totally Inorganic
- Dye Free and UV Stable
- 2 Component System w/ Defined Replenishment Schedule
- Suitable for Rack and Barrel Applications
- Suitable for Use with Torque Tension Modifiers
- Provides up to 120 Hrs of Corrosion Protection to WR.



## Film Characteristics

- Cr<sup>+3</sup>: 0.4 - 0.6 mg/dm<sup>2</sup>
- Cobalt: 0.02 – 0.04 mg/dm<sup>2</sup>
- Selenium: 0.3 - 0.5 mg/dm<sup>2</sup>

## Solution Characteristics

- Trivalent Chromium
- Cobalt
- Selenium (anions)
- Fluoride
- Nitrate



## Application / Appearance

Acid Zinc

Alkaline Zinc

Cyanide Zinc

Appearance w/out Topcoat:

**Bright Yellow Iridescent**

Appearance w/ Topcoat:

**Uniform, Yellow Iridescent**



## Operating Conditions

<u>Parameters</u>	<u>Range</u>	<u>Optimum</u>
LANTHANE Yellow 335 Part A	80 - 120 ml/L	100 ml/L
LANTHANE Yellow 334 Part B	3 - 12 ml/L	7 ml/L
pH	1.6 – 2.0	1.8
Temperature	24 - 35° C	28° C
Immersion time	45 - 120 seconds	90 seconds
Agitation	Moderate Air/Mechanical	



## pH

- Optimum range : 1.6 - 2.0
- pH > 2.0 decreases passivation rate
- pH < 1.6 increases the amount of dissolved zinc
- HNO<sub>3</sub> ↓ and NaOH ↑

## Immersion time

- Acid zinc : 60 - 90 seconds
- Alkaline zinc : 45 - 75 seconds

## Equipment

PVDF, Teflon or Ceramic.



## Bath Maintenance/Operating Tips

- LANTHANE Yellow 335 Part A and LANTHANE Yellow 334 Part B must be replenished according to schedule provided in the Technical Data Sheet.
- LANTHANE Yellow 335 Part A and LANTHANE Yellow 334 Part B concentrates must NOT be mixed in concentrated form.
- A low concentration of LANTHANE Yellow 335 Part A may result in a dark stain.
- An excess of LANTHANE Yellow 335 Part A does not create a particular problem, but concentrations > 140 ml/l may reduce iridescence.
- A low concentration of LANTHANE Yellow 334 Part B will result in a pale yellow color.
- An excess of LANTHANE Yellow 334 Part B may produce stained, irregular or dark films.





## Bath Maintenance/Operating Tips Continued

- Fluoride resistant automatic feed and pH control equipment is strongly recommended.
- Heating/cooling equipment is strongly recommended.
- Increased drain time is recommended to reduce drag-out.
- LANTHANE Yellow 335 dissolves 0.8-1.2  $\mu\text{m}$  of zinc. Therefore, for best corrosion protection, we recommend 8  $\mu\text{m}$ . At  $< 5 \mu\text{m}$ , the corrosion protection afforded decreases dramatically.



## Corrosion Resistance

According to the following:

DIN 50021SS

ASTM B117/97

UNI 9227/NSS

**LANTHANE Yellow 335** will provide the following:

Up to 120 Hrs to WR

Up to 400 Hrs to RR (minimum 8  $\mu\text{m}.$ )

*Note: The use of a FINIGARD topcoat will improve the NSST results.*



## Operating Sequence

1. Coventya Zinc Electroplate
2. Cold Water Rinse
3. Cold Water Rinse
4. Acid Activation (0.2 - 1.0% HNO<sub>3</sub> )
5. Cold Water Rinse
6. Cold Water Rinse
7. LANTHANE YELLOW 335 Passivate
8. Cold Water Rinse
9. Cold Water Rinse
10. FINIGARD (optional)
11. Dry



## Metallic Contamination Limits

Zn	15 g/l
Fe	100 mg/l

### *Note(s):*

- We recommend increasing the LANTHANE Yellow 335 Part A concentration (1% for every 5g/l) to compensate for increasing Zn contamination levels.*
- The presence of Fe reduces the corrosion protection afforded by the passivate film.*



Thank you for your time and  
attention!