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COLDIP© TRI-V YELLOW CONVERTER

TECHNICAL DATA
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COLDIP© TRI-V YELLOW CONVERTER

A GUIDE FOR OBTAINING ECONOMICAL YELLOW TRIVALENT (HEX-FREE) ZINC COATINGS WITH EXCELLENT COLOR

MINIMAL RESISTANCE

- Inexpensive/Economical Processing
- Attractive Yellow Color for Decorative and/or Part Identification
- Minimal Corrosion Resistance (12-48 hours of Salt Spray Protection)
- Non-Automotive Applications

RECOMMENDED PRODUCTS
(Please refer to individual technical data sheets for in-depth product descriptions and use)

COLDIP© TRI-V	highly economical trivalent passivate used to obtain minimal to moderate corrosion resistance.
COLDIP© TRI-V YELLOW CONVERTER	specially formulated colorant, which converts clear/blue trivalent coatings to attractive, yellow trivalent coatings.
Zinc-Chro-SHIELD©	sealer/top-coat which provides additional corrosion resistance.

OPTION 1
For up to 12 hours of salt spray protection to white rust without sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULITPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5% v/v)
6. PASSIVATE
   - Composition: COLDIP© TRI-V (2%)
     COLDIP© TRI-V YELLOW CONVERTER (1%)
   - Dip Time: 15-20 seconds
   - Temperature: 115º - 125º F*
7. RINSE DRY

**Note: The passivate (chromate) solution can be operated as low as 80º F., but loss of color and salt spray protection may occur.*

On some parts, the adhesion of the yellow color is less than optimal. The use of a sealer is recommended in these cases (see "Option 2"), which will prevent the yellow from "rubbing off".

OPTION 2
For up to 48 hours of salt spray protection to white rust with sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULTIPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5 % v/v)
6. PASSIVATE
   - Composition: COLDIP© TRI-V (2%)
     COLDIP© TRI-V YELLOW CONVERTER (1%)
   - Dip Time: 15 -20 seconds
   - Temperature: 115º - 125º F*
7. RINSE
8. FINAL RINSE/SEAL: Zinc-Chro-SHIELD (5%) at 80º F / 25 second dip
9. DRY

MODERATE RESISTANCE

- Functional and Attractive Yellow Finish
- Moderate Corrosion Resistance (48 – 120 hours of Salt Spray Protection)
- Non-Automotive Applications

RECOMMENDED PRODUCTS
(Please refer to individual technical data sheets for in-depth product descriptions and use)

COLDIP© TRI-V	highly economical trivalent passivate used to obtain minimal to moderate corrosion resistance.
COLDIP© TRI-V 120	high performance trivalent passivate for obtaining moderate to excellent corrosion resistance.
COLDIP© TRI-V YELLOW CONVERTER	specially formulated colorant, which converts clear/blue trivalent coatings to attractive, yellow trivalent coatings.
Zinc-Chro-SHIELD©	sealer/top-coat which provides additional corrosion resistance.

OPTION 1
For up to 48 hours of salt spray protection to white rust with sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULITPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5% v/v)

6. PASSIVATE
    - Composition: COLDIP© TRI-V (2%)
      COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 25 seconds
    - Temperature: 115º - 125º F
7. RINSE
8. FINAL RINSE/SEAL: Zinc-Chro-SHIELD© (5%) at 80º F / 25 second dip
9. DRY

OPTION 2

For 48-72 hours of salt spray protection to white rust without sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULTIPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5 % v/v)
6. PASSIVATE
    - Composition: COLDIP© TRI-V 120 (5%)
      COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 60 seconds
    - Temperature: 115º - 125º F*
7. RINSE
8. DRY

**Note: On some parts, the adhesion of the yellow color is less than optimal. The use of a sealer is recommended in these cases (see "Option 2"), which will prevent the yellow from "rubbing off".*

OPTION 3

For up to 120 hours of salt spray protection to white rust with sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULTIPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5% v/v)
6. PASSIVATE:
    - Composition: COLDIP© TRI-V 120 (5%)
      COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 60 seconds
    - Temperature: 115º - 125º F
7. RINSE
8. FINAL RINSE/SEAL: Zinc-Chro-SHIELD© (5%) at 80º F / 25 second dip
9. DRY

**Note: When the zinc deposit is from an alkaline cyanide-free process and/or when passivating in barrels, then options #2 and #3 are recommended for obtaining moderate levels of corrosion resistance.*

MAXIMUM RESISTANCE

- Attractive Yellow Finish
- Maximum Corrosion Resistance (120+ hours of Salt Spray Protection)
- Automotive Applications

RECOMMENDED PRODUCTS
(Please refer to individual technical data sheets for in-depth product descriptions and use)

COLDIP© TRI-V 120 – high performance trivalent passivate for obtaining moderate to excellent corrosion resistance.
COLDIP© TRI-V 121 – super high performance trivalent passivate for obtaining maximum corrosion resistance.
COLDIP© TRI-V YELLOW CONVERTER – specially formulated colorant, which converts clear/blue trivalent coatings to attractive, yellow trivalent coatings.

Zinc-Chro-SHIELD© - sealer/top-coat which provides additional corrosion resistance.

OPTION 1
For 120+ hours of salt spray protection to white rust with sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULITPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5% v/v)
6. PASSIVATE
    - Composition: COLDIP© TRI-V 120 (5%)
COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 60 seconds
    - Temperature: 115º - 125º F
7. RINSE
8. FINAL RINSE/SEAL: Zinc-Chro-SHIELD© (5%) at 80º F / 25 second dip
9. DRY

OPTION 2
For 120+ hours of salt spray protection to white rust without sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULTIPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5 % v/v)
6. PASSIVATE
    - Composition: COLDIP© TRI-V 121 (5%)
COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 60 seconds
    - Temperature: 115º - 125º F *
7. RINSE
8. DRY

**Note: On some parts, the adhesion of the yellow color is less than optimal. The use of a sealer is recommended in these cases (see "Option 2"), which will prevent the yellow from "rubbing off".*

OPTION 3
Maximum Protection: For 120+ hours of salt spray protection to white rust with sealer

1. CLEAN & PICKLE
2. MULTIPLE RINSES
3. ZINC PLATE
4. MULTIPLE RINSES
5. NITRIC PRE-DIP (0.25 – 0.5% v/v)
6. PASSIVATE:
    - Composition: COLDIP© TRI-V 121 (5%)
      COLDIP© TRI-V YELLOW CONVERTER (1%)
    - Dip Time: 60 seconds
    - Temperature: 115º - 125º F
7. RINSE
8. FINAL RINSE/SEAL: Zinc-Chro-SHIELD© (5%) at 80º F / 25 second dip
9. DRY

HANDLING & STORAGE

Columbia Chemical recommends referring to the specific product Safety Data Sheets for safety, handling, and storage precautions.

NON-WARRANTY

The data contained in this bulletin is believed by Columbia Chemical Corp. to be accurate, true, and complete. Since, however, final methods of use of this product are in the hands of the customer and beyond our control, we cannot guarantee that the customer will obtain the results described in this bulletin, nor can we assume responsibility of the use of this product by the customer in any process which may infringe the patents of third parties.