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Comparing VpCI-126 to NTI Film for Metal Stampings

Purpose: To compare the corrosion protection of VpCI-126 blue film to a similar gauge NTI film on parts from customer.

Method: ASTM D-1748 humidity cabinet (120°F, 95% relative humidity)

Materials: VpCI-126 Blue Film
 NTI green film
 Two metal stampings

Procedure: The following procedure was used:

- 1) Prior to testing, both stampings were cleaned with methanol.
- 2) After cleaning, each stamping was packaged in a separate bag.
 - a. The first stamping was packaged in a VpCI-126 Blue Film bag.
 - b. The second stamping was packaged in the green NTI bag.
- 3) After packaging, the stampings were allowed to sit overnight.
- 4) The stampings were then placed in ASTM D-1748 humidity cabinet.
- 5) Both stampings were visually inspected periodically.
- 6) After 840 hours, both stampings were removed from ASTM D-1748 humidity testing.
- 7) Both stampings were unpackaged, visually inspected and photographed.

Results: The following results were found:

Film Used	Time to Failure (Hours)
NTI green film	<72
VpCI-126 Blue Film	840

Conclusion: VpCI-126 Blue Film provided significantly better corrosion protection than the NTI film. In total, the Cortec film lasted nearly 12 times longer than the NTI film. This result suggests that no additional rust preventive is necessary during the pre-packaging steps. Results of FT-IR test don't show any corrosion inhibitors in NTI film.

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Figure 1: Metal stamping, wrapped in NTI film, after 840 hours of humidity testing.



Figure 2: Metal stamping, wrapped in VpCI-126 blue film, after 840 hours of humidity testing.