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Packaging Evaluation for Our Customer

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Results reported by:



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Background:

Our customer manufactures automotive parts for various customers. They are storing parts inside crates lined with a VCI bag, and Daubert paper interleaved between layers of parts. Their customers are experiencing corrosion issues when parts arrive, and our customer is looking for an alternative solution to their current VCI supplier. Cortec Laboratories was asked to show efficacy and performance of VpCI-126 film against our customer's current film.

Sample Received:

Two pallets, packaged with layered parts. Parts were enclosed in VCI film bags, with cardboard and Daubert paper interleaved between layers of parts. One pallet contained competitor VCI film, while the other used VpCI-126 film.

Method:

Large Humidity Chamber

Procedure:

Crates were inspected for any signs of corrosion or damage to the film before testing. No corrosion was noted on the parts, and no tears or rips in the film was noted. The film used to line the crates was then folded over and taped shut. Crates were placed into the large humidity chamber and inspected regularly for first signs of corrosion.

Results:

Parts protected by VpCI-126 film did not show any corrosion during the duration of the test. Parts protected by the competitor film showed corrosion after 96 hours in the large humidity chamber. Pictures of the parts at 96 hours of testing can be seen below.



Figure 1: Parts protected by competitor VCI film. Heavy water ingress caused corrosion on the parts.



Figures 2 & 3: Close up view of corrosion on parts protected by competitor film.



Figure 4: Top layer of paper, parts protected by VpCI-126 film. No significant water ingress occurred.



Figures 5 & 6: Parts protected by VpCI-126 film. No visible corrosion was seen on the parts.

Interpretations:

Water ingress occurred in the crate protected by competitor VCI film. No obvious signs of ingress were observed, e.g. holes, tears, openings. The parts protected by VpCI-126 did not show similar water ingress, nor did any parts show corrosion after 96 hours of testing.