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Comparison of VpCI-389D and Rilco RP-184

For: Customer

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Results reported by:

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Background: The customer is a global leader in the design, manufacture, and supply of systems and components for the off highway vehicle and equipment market. For this project, we are focusing on a machined component, manufactured for their customer. VpCI-389D currently has Conditional Approval under their customers' specification, which would make it a viable option for use with this specific component. The efficacy of VpCI-389D will be evaluated and compared to the oil based product currently used by them.

Sample Received: Three machined metal parts
~500ml Rilco RP-184, received in a plastic bottle, in good condition.

Method: Humidity Testing, CC-018 (based on ASTM D1748)

Materials: Three machined metal parts
Rilco RP-184
VpCI-389D, batch #09235
1000ml plastic beakers
Laboratory grade methanol

Procedure: The following procedure was used:

1) Upon receipt, all parts were visually inspected for corrosion.
2) All parts were then cleaned with methanol and allowed to air dry. Parts were then further prepared as follows:
    a. No preparation (control)
    b. Coated with Rilco RP-184
    c. Coated with VpCI-389D
3) After coating, parts were hung over the weekend to dry.
4) Parts were then hung in the Koehler humidity chamber, running ASTM D1748 conditions.
5) All parts were visually inspected periodically.
6) After 336 hours, all parts were removed from the humidity chamber.
7) All parts were visually inspected and photographed.

Results:

Part Treatment	Time to Failure (Hours)
None (control)	<16
Rilco RP-184	40
VpCI-389D	336

Photos: See below.

Figure 1: Part 16-108-A (control), after 336 hours in ASTM D1748 testing.

Figure 2: Part 16-108-B, treated with Rilco RP-184, after 336 hours in ASTM D-1748 testing.

Figure 3: Part 16-108-C, treated with VpCI-389D, after 336 hours in ASTM D-1748 testing.

Interpretations: After 336 hours in ASTM D-1748 humidity testing, VpCI-389D provided superior corrosion protection, when compared to the Rilco solution currently used by the customer.

Further, this component is being made for their customer, and VpCI-389D already has Conditional Approval under their Specification (Corrosion Preventative, Medium Term Indoor Storage), which would be appropriate for this application.