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LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2267 Testing

Comparison of LORD Rust Preventative to VpCI-377

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Project #:14-254-1825

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Background: It was requested that the submitted LORD rust preventative be compared to VpCI-377 to compare corrosion protection properties.

Sample Received: Lord rust preventative sample, good condition, labeled 14-254-1825

Method:

1. Humidity Test, CC-018, modified

Materials:

1. Carbon Steel Q-Panels, SAE 1010
2. Methanol, lab grade
3. VpCI-377 Lot 14334
4. Koehler Humidity Chamber, set to ASTM D 1748 Conditions (120±°F)

Procedure:

1. The carbon steel panels were cleaned using methanol.
2. The panels were then coated with the following samples. One panel was coated with each sample. Lord RP was prepared at full concentration and diluted because it was unclear if the sample was intended to be used diluted or full concentration.
    a. 10% VpCI-377 in DI water (% weight)
    b. 10% Lord RP in DI water (% weight)
    c. Lord RP (undiluted)
3. The panels were then hung to drip dry overnight. The next day, the panels were placed in to the Koehler humidity chamber.
4. The samples were then checked daily (except for weekends) for visual signs of corrosion. When corrosion was seen, the time to failure was recorded.
5. After all the panels had failed, the panels were removed from the chamber, dried, and photographed.

Results:

Humidity Chamber Results

Sample	Time To Failure	Observations after 142 hours in the humidity chamber
VpCI-377-10%	142 hours	Very Light Corrosion
Lord RP-Full Concentration	76 hours	Light – Moderate Corrosion
Lord RP-10%	76 hours	Moderate Corrosion

Results relate only to the items tested

Photos:

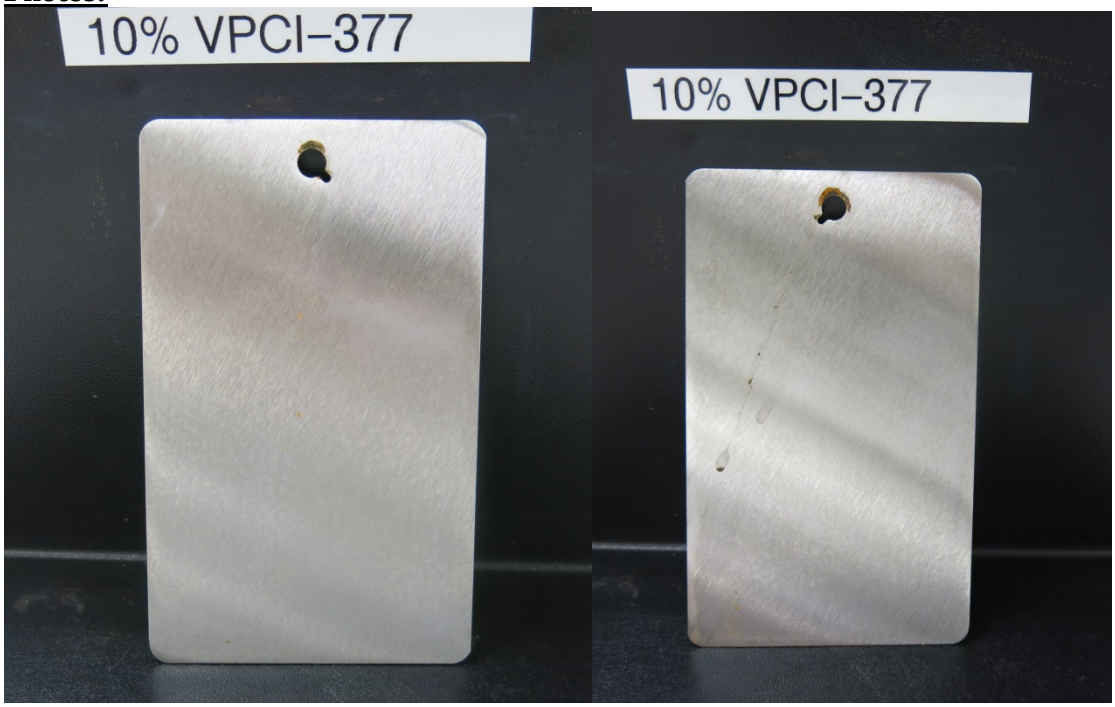

Figure 1. Front and back side of panel coated with 10% VpCI-377, that was in the humidity chamber for 142 hours

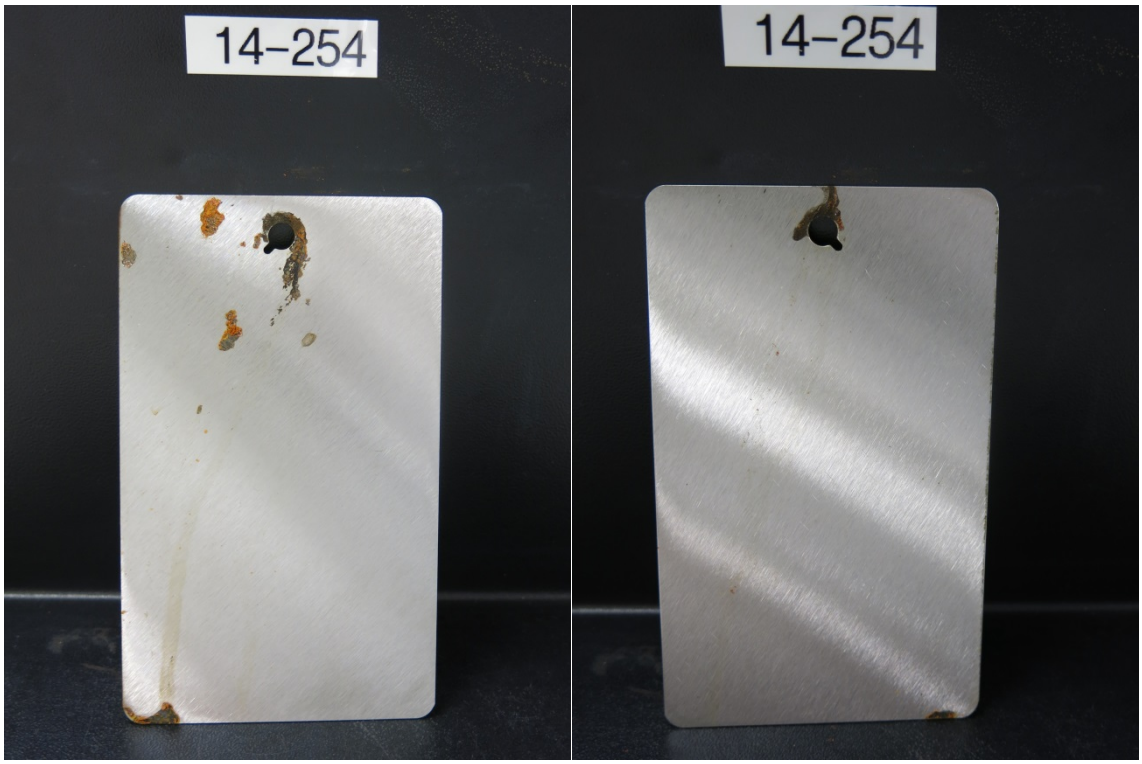

Figure 2. Front and back side of panel coated with Lord RP, full concentration, which was in the humidity chamber for 142 hours

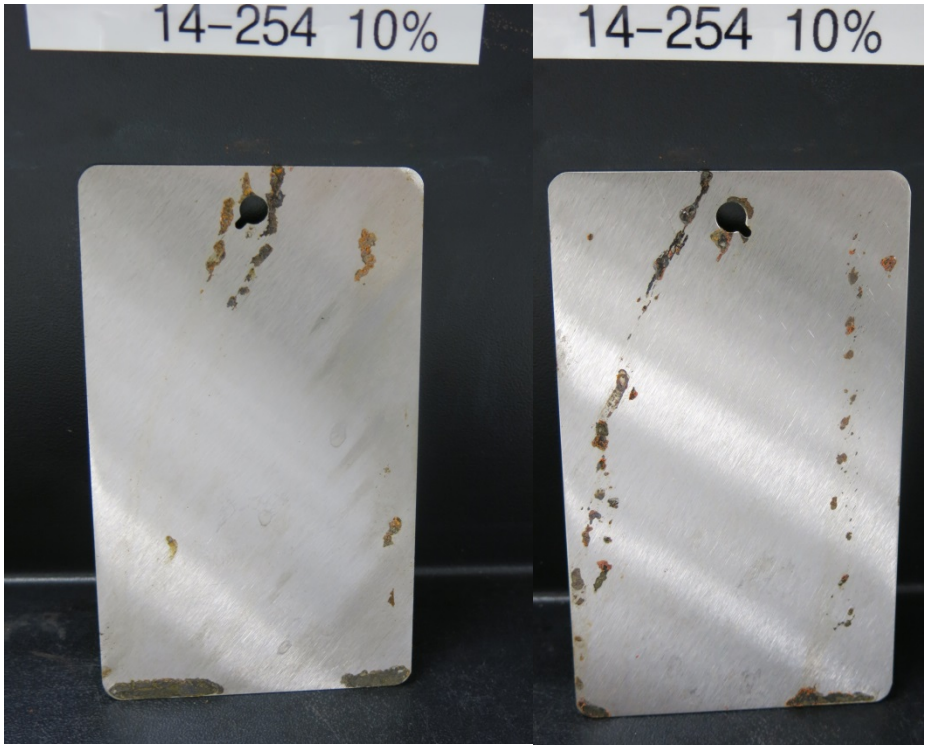

Figure 3. Front and back side of panel coated with 10% Lord RP, after being in the humidity chamber for 142 hours.

Interpretations: The humidity test results determined that 10% VpCI-377 provided better corrosion protection than the Lord RP even in full concentration.