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## ***Evaluation of Korean Inhibitor, Eco Pro***

**To:** Walter Pregelj Barth  
LUBOCKS

**For:** Agustin Echenique  
Visuar

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**Project #:** 16-243-1525.supplemental

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**Background:** Walter Pregelj Barth from LUBOKS, Cortec distributor in Argentina, sent a sample of EcoPro, a galvanic corrosion inhibitor manufactured in Korea. He would like the corrosion protection properties of this product evaluated since there is no data regarding this product's performance by humidity chamber.

**Sample Received:** Eco Pro, received on 12/12/16

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

**Materials:** Koehler humidity chamber  
Cold rolled steel panels, SAE 1008 (Q-Panel stock #SP-107323)  
VpCI-377 (batch #127716)  
VpCI-239 (batch #128916)  
Ethanol (Rm-315)  
Methanol, ACS grade (lot #032916C)  
240 grit sandpaper  
Stainless steel hooks  
DI water

**Procedure:** The following procedure was followed for the Humidity Testing:

1. Prepare the steel panels by sanding with 240 grit sandpaper.
2. Clean the panels in methanol, and then dry.
4. Coat the panel with the products to be tested, and hang to dry overnight. The control panel was not treated.
5. Place the panels in the humidity chamber and inspect for corrosion periodically.
6. Record the time it takes for the panels to fail. Failure is determined by visually observing one spec of corrosion that is 1-3mm in diameter, or three specs of corrosion at least 1mm in diameter.
7. After 3 hours, the panels were taken out of the humidity chamber, hung to dry, and then photographed.

**Results:** The following results were found:

Steel Panel Treated With:	Time to Failure
Control Panel (not treated)	<1 hour
Eco Pro	<3 hours
VpCI-239	Did not fail
10% VpCI-377	Did not fail
80% VpCI-377 + 20% Ethanol	Did not fail

**Interpretations:** Eco Pro failed the humidity testing in less than 3 hours. This product does not provide very good corrosion protection. However, Cortec offers many alternative products that will outperform Eco Pro.

**Photos after 3 hours of humidity testing:**



Control



Eco Pro



VpCI-239



10% VpCI-377



80% VpCI-377 + 20% Ethanol