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4119 White Bear Parkway, St. Paul, MN 55110 USA Phone: (651) 429-1100, Fax: (651) 429-1122 Toll Free: (800) 4-CORTEC, E-mail: info@cortecvci.com cortecvci.com • corteclaboratories.com **Evaluation of Shell Ensis DW 1255** To: Dario Dell'Orto From: Cortec Corporation Laboratories 4119 White Bear Parkway St. Paul, MN 55110 cc: **Boris Miksic** Anna Vignetti **Cliff Cracauer Project** #: 12-119-1825(bis) Brian Benduling Test conducted by: Brian Benduha Lab Technician

Approved by:

U. Rharshow -

Margarita Kharshan Laboratory Director



June 14, 2012 Date:

Background: A customer is having corrosion issues when using VpCI-329. From the pictures provided by the customer, it appears that VpCI-329 doesn't protect against corrosion as well as Shell Ensis DW 1255.

Sample Received: Shell Ensis DW 1255, received on 5-23-12 in good condition

Method: ASTM D-1748 humidity cabinet test (120°F, 100% relative humidity)

- **Materials:** 1) VpCI-329 (batch #08231)
 - 2) EcoLine 3220 (batch #10071)
 - 3) EcoLine 3690 (batch #20311)
 - 4) 1010 carbon steel panels

Procedure: The following procedure was followed for ASTM D-1748:

- 1) Coat carbon steel panels with the products being tested, and hang to drip/dry overnight.
- 2) Place the panels inside the humidity chamber (5-30-12), and inspect for corrosion on a daily basis.
- 3) Record the number of hours until the panels fail. Note- failure is determined by observing one spec of corrosion that is 1-3mm in diameter, or three specs of corrosion at least 1mm in diameter.
- 4) After 360 hours the panels were taken out of the chamber (6-14-12), hung to dry, and then photographed (see pictures on next page).

Results:

Sample	Time to Failure
Shell Ensis DW 1255	280 hours
EcoLine 3220	300 hours
EcoLine 3690	Did not fail
VpCI-329	Did not fail

Interpretations: According to the above data, VpCI-329 provides better corrosion protection than Shell Ensis DW 1255. EcoLine 3690 also provides very good protection against corrosion. After 360 hours of being tested in the humidity chamber, VpCI-329 and EcoLine 3690 showed no signs of corrosion.

Photos:

After 360 hours in humidity chamber



Shell Ensis DW 1255

Ecoline 3220

Ecoline 3690

VpCI-329