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Comparing VpCI-126 to Daubert Film for Protection of Cast Iron

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Background: Customer sent 3 raw castings to Cortec for testing. They would like to compare the effectiveness of Daubert Premium Metal Guard film to Cortec VpCI-126 film.

Sample Received: Three raw iron castings
Daubert Premium Metal Guard Film

Method: ASTM D-1748 (modified)

Materials: Raw iron castings
Daubert Premium Metal Guard film
VpCI-126 Blue Film
Laboratory grade methanol

Procedure: The following procedure was used:

- 1) All three castings were cleaned with methanol prior to testing.
- 2) After cleaning, one of the casting received no further treatment.
 - a. This piece was tested as a control.
- 3) The remaining two casting were packaged, one in VpCI-126 Film and the other in Daubert film.
 - a. Both packages were heat sealed and allowed to condition overnight.
- 4) All three casting were then placed in ASTM D-1748 humidity cabinet.
- 5) Castings were visually inspected periodically.
- 6) After 168 hours, all castings were removed from ASTM D-1748 humidity cabinet.
- 7) Castings were unwrapped, visually inspected, and photographed.

Results: The following results were found:

Corrosion Protection	Hours to Corrosion
None (Control)	<8
Daubert Metal Guard	48
VpCI-126	168*

* See Interpretations section below.

Photos: See below



Figure 1: Control casting after 168 hours of testing.



Figure 2: Daubert wrapped casting after 168 hours of testing.



Figure 3: VpCI-126 wrapped part after 168 hours of testing.

Interpretations: After 168 hours of testing, VpCI-126 provided superior protection on raw castings, when compared to Daubert Premium Metal Guard. The casting packaged in VpCI-126 was corrosion free after 96 hours and had the corrosion seen above after 168 hours, so the exact length of protection is not known. However, the protection is at least twice as long as the 48 hours provided by Daubert film.