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# *Evaluation of Corrosion Inhibition Offered to Cast Iron by Cortec VpCI-126 Film*

**Background:** The Customer submitted cast iron parts and Daubert Nox-Rust Vapor Wrapper to Cortec Corporation. An evaluation and comparison involving Cortec VpCI-126 film is sought. Currently, the customer is using a non-corrosion inhibiting plastic film with a sheet of Daubert Nox-Rust Vapor Wrapper enclosed within.

**Purpose:** Evaluate and compare the protection offered by Cortec VpCI-126 film on the submitted cast iron parts.

**Method:** ASTM D 1748-83 (120 deg F, ~ 100% R.H.)

**Materials:** Cast Iron Parts (3 total)
Daubert Nox-Rust Vapor Wrapper
Cortec VpCI-126 film

**Procedure:** The above tests were performed according to standard procedures for each.

**Results:**

| Material | Time until corrosion |
|---|---|
| Low density polyethylene film, 6" x 6" Daubert Nox-Rust Vapor Wrapper, 4 mil | 2 days, 9hours < x < or equal to 4 days |
| Cortec VpCI-126 film, 4 mil | 4 days < x < or equal to 7 |
| Low density polyethylene film (Control) | 2 days, 9hours < x < or equal to 4 days |

x = Material
Pictures Enclosed

Note: Cast Iron parts were conditioned in their respective packages, for 1.5 hours, before inserting into the extreme conditions of the environmental chamber.

**Conclusion:** Cast Iron part enclosed within Cortec VpCI-126 film, provided roughly twice as much as corrosion inhibition, as cast iron part enclosed within low density polyethylene bag/Daubert Nox-Rust Vapor Wrapper. Addition of Daubert Nox-Rust Vapor Wrapper to the plain polyethylene doesn't increased protection properties of the last one.

| | |
|---|---|
|  |  |
| Control | Control |
|  |  |
| Daubert | Daubert |
|  |  |
| VpCI-126 | VpCI-126 |