CORTEC Laboratories
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

LABORATORY ACCREDITATION BUREAU
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Certificate # L2267 Testing

Evaluating Corrosion Inhibiting Packaging Systems for Customer

From: Cortec Corporation Laboratories
4119 White Bear Parkway
St.Paul, MN 55110

cc: Boris Miksic
Anna Vignetti
Bob Boyle
Mike Morin

Project #: 10-228-1125(bis)

Test conducted by: Eric Uutala

Eric Uutala
Technical Service Engineer

Approved by: M. Kharshan

Margarita Kharshan
Laboratory Director

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Background: Customer's sealing system division sent ten trays of parts in plastic dunnage. Parts were wrapped using combinations of Cortec film, Armor, and/or non-VCI polyethylene (PE) film at different thicknesses.

Sample Received: Ten trays of parts, packaged and labeled by Customer

Method: Modified ASTM D-1748 (~120°F, >95% relative humidity)

Materials: Ten trays of parts
Cor-Pak EX Film
VpCI-126 Blue Film, 2- and 3-mil
Armor VCI Film, 2- and 3-mil
Non-VCI PE Film
Bubble wrap

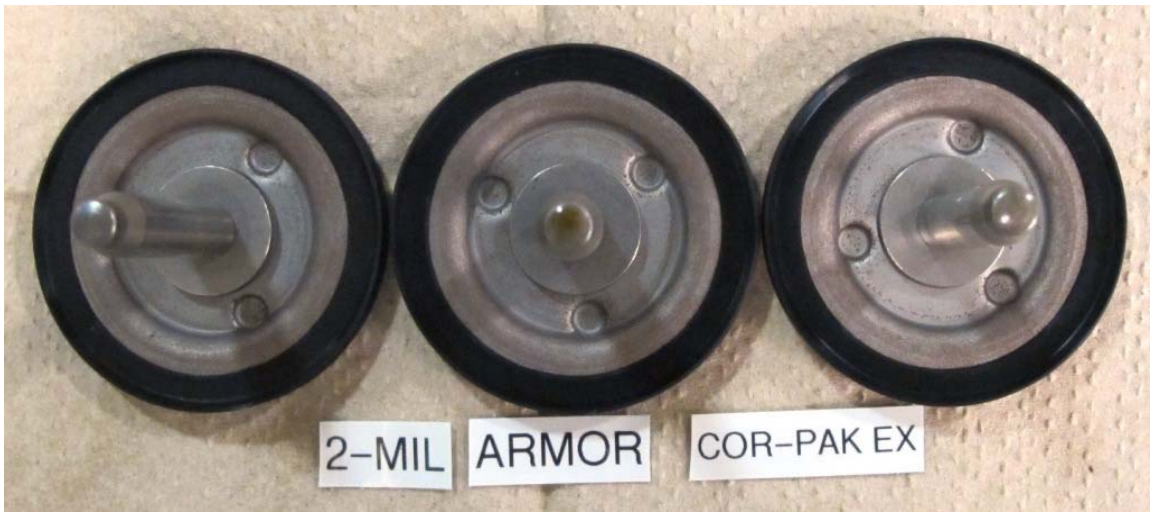
Procedure: The following procedure was used:

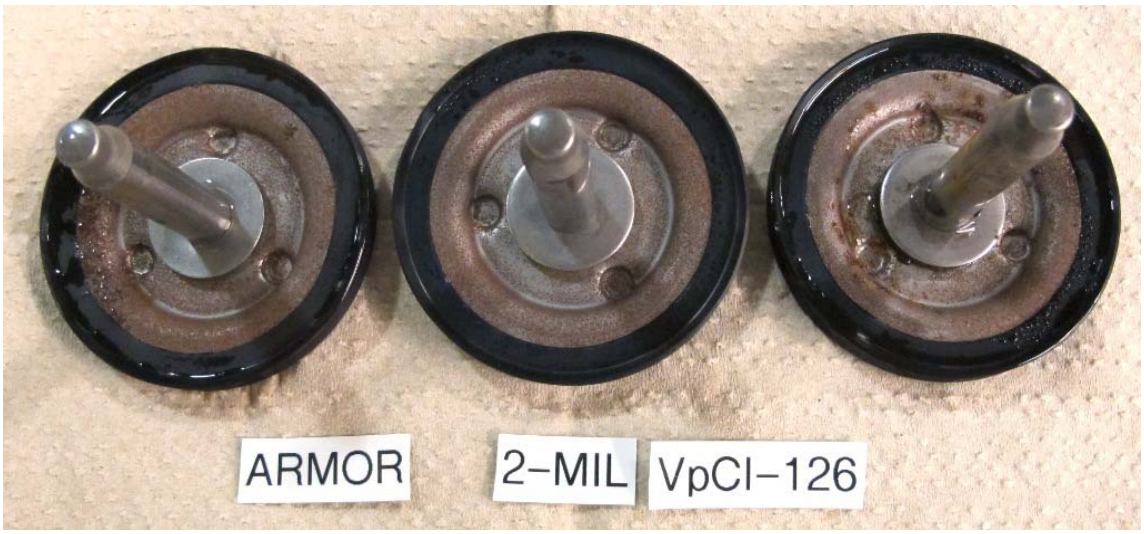
1) Trays of parts arrived in five separate boxes.
2) Trays were removed from boxes and outer film was secured using 3M sealing tape.
3) All trays were then placed into modified ASTM D-1748 humidity chamber.
4) Without opening the outer bags, trays were visually inspected periodically.
5) After 720 hours, all trays were removed from modified ASTM D-1748 humidity chamber.
6) Bags were opened; all parts were visually inspected and photographed.

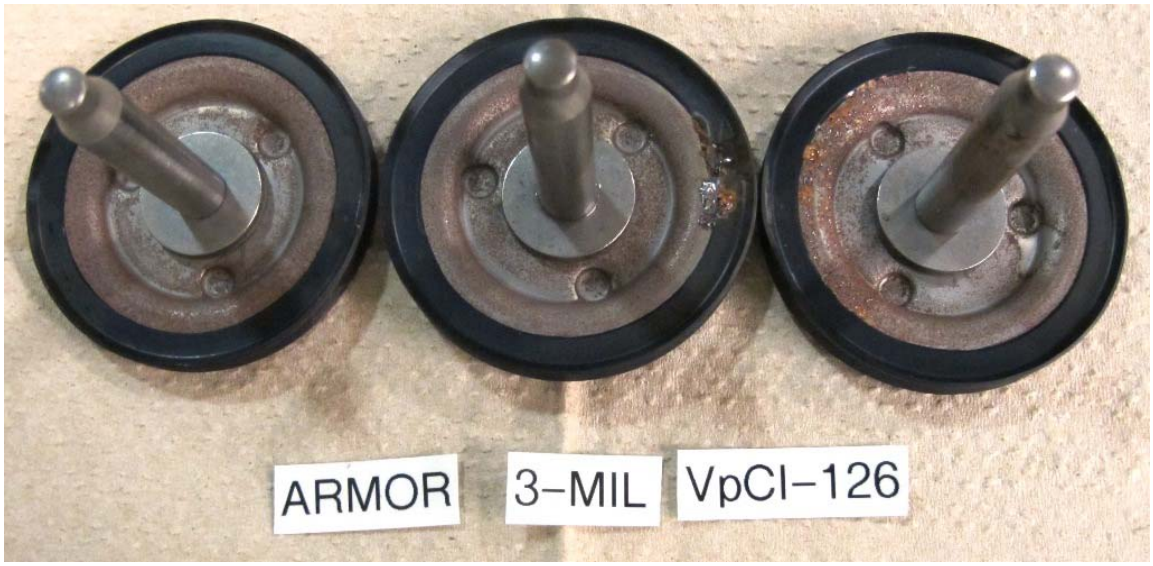
Results: The following results were found:

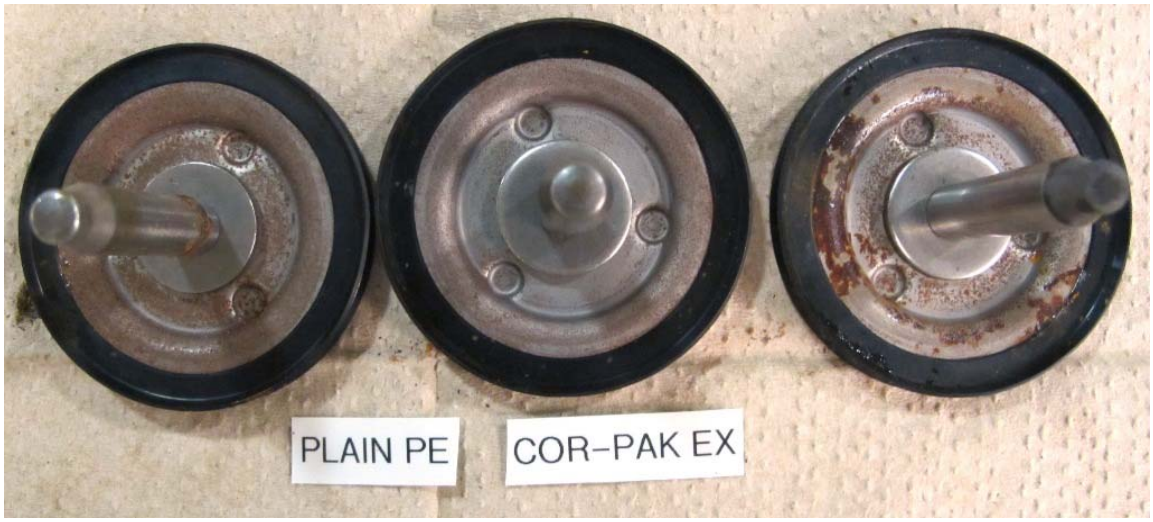
Packaging System	Time to Corrosion (Hours)
Armor film only	<24
Armor/Cor-Pak EX	648
Armor/2-mil VpCI-126	432
Armor/3-mil VpCI-126	432
Non-VCI PE/Cor-Pak EX	528
Non-VCI PE/2-mil VpCI-126	528
Non-VCI PE/3-mil VpCI-126	600
2-mil VpCI-126	600
2-mil VpCI-126/Cor-Pak EX	624
2-mil VpCI-126/3-mil VpCI-126	648

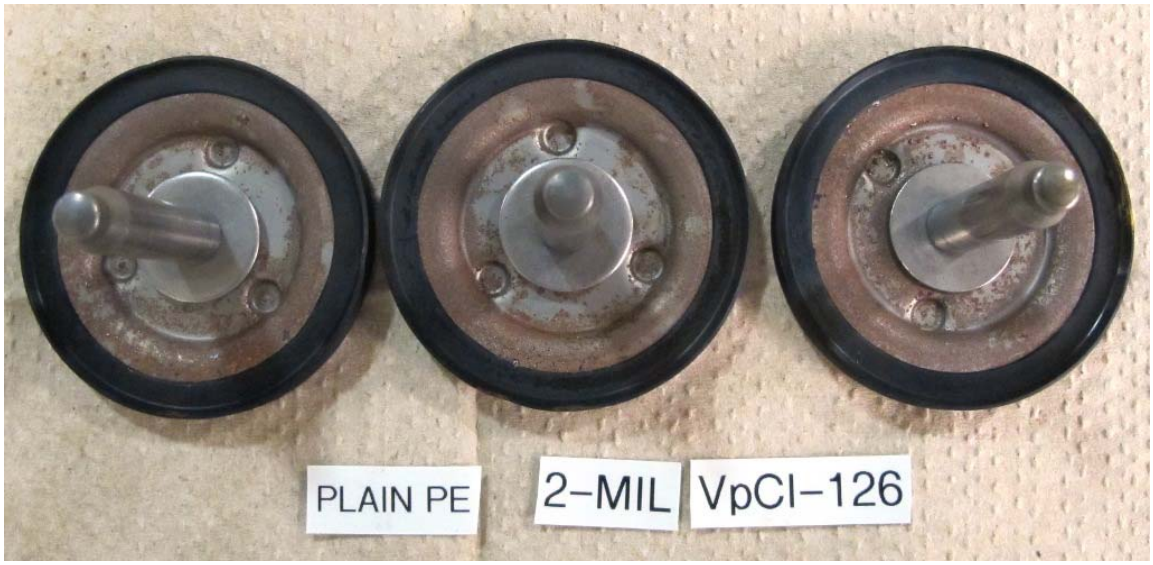
Photos:

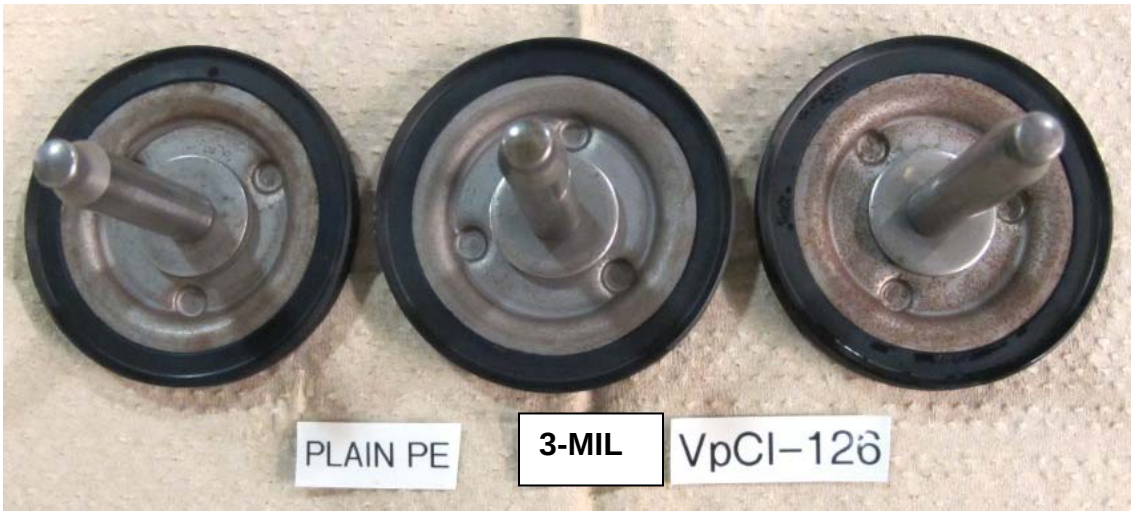


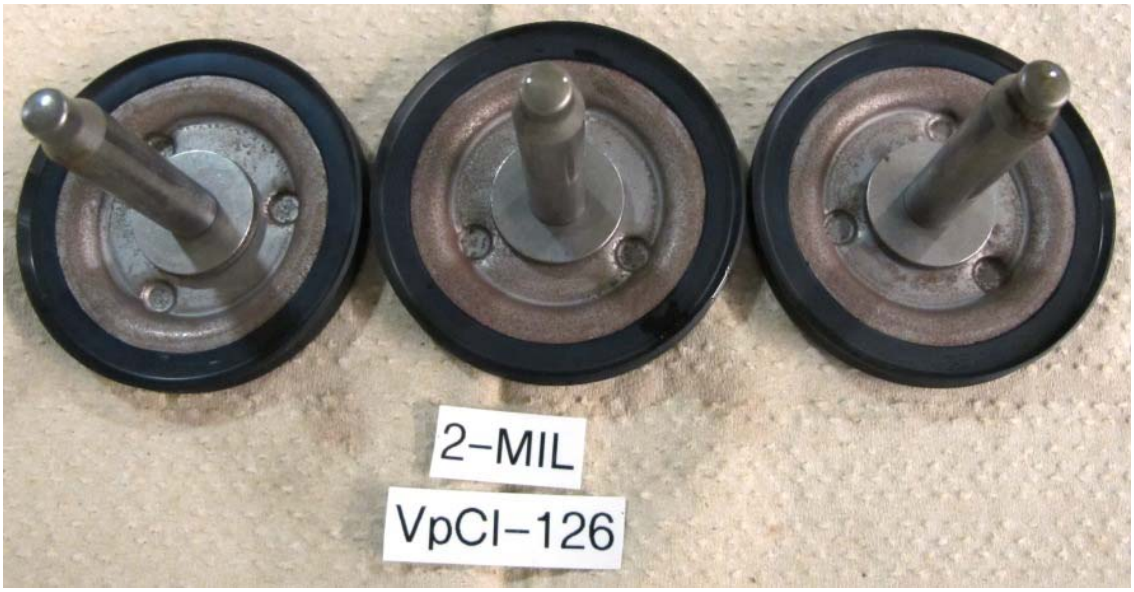


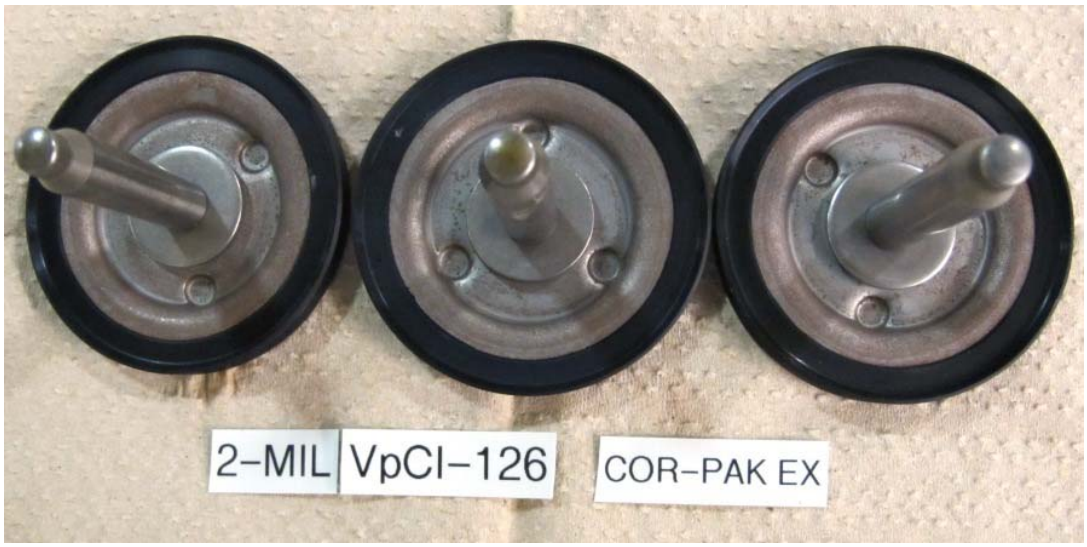


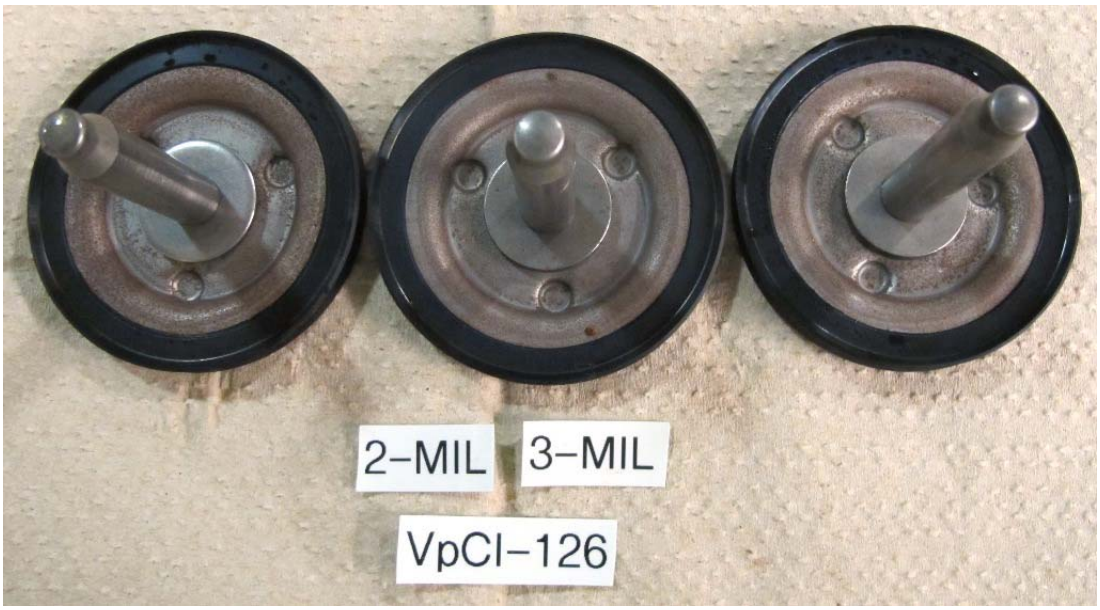












Interpretations: After 720 hours of testing, the best protection was given by 3 packaging systems: Armor film with Cor-Pak EX film, 2-mil VpCI-126 film with Cor-Pak EX Film, and 2-mil VpCI-126 film with 3-mil VpCI-126 film. The most severe corrosion was seen on parts packaged in only Armor film.