

# *Evaluating Cortec Corporation Cor-Pak Linerboard with Michelman Rustban 105*

**Background:** Four cardboard boxes each containing an automobile brake drum were submitted for evaluation of VCI contents and corrosion protection performance. The inside walls of three of the boxes contain different corrosion inhibiting coatings. The inside walls of the fourth box does not contain a corrosion inhibiting coating.

**Purpose:** Evaluate the corrosion inhibition offered by each of the four boxes on the automobile brake drums.

**Method:** ASTM D 1748-83 (110 Deg F, 100% R.H.)

**Materials:**

(1) Corrugated cardboard box coated with Cortec VpCI 350A/Cortec VpCI-350B.

1. Corrugated cardboard box coated with Cortec VpCI-355 EcoCoat/Cortec VpCI-350A/Cortec VpCI-350B

(3) Corrugated cardboard box coated with Michelman Rustban 105.

(4) Corrugated cardboard box with no coating on the inside walls of the box.

**Procedure:** (1), (2),(3) and (4) were inserted into environmental chamber according to ASTM D 1748-83. The boxes were evaluated every half hour during time of testing due to the extreme conditions. Boxes were removed from the environmental chamber at the end of eight hour work day and then reinserted at the beginning of the next work day.

This was done to determine the exact time when corrosion began on each automobile brake drum.

**Results:**

ASTM D 1748-83 (110 Deg F, 100% R.H.)

Material	Time until corrosion observed (hrs)
Corrugated cardboard box with Cortec VpCI-350A/VpCI-350B coated on inside walls. Automobile brake drum enclosed within box.	18
Corrugated cardboard box with Cortec VpCI-355 Ecocoat/VpCI-350A/VpCI-350B coated on inside walls. Automobile brake drum enclosed within box.	10
Corrugated cardboard box with Michelman Rustban 105 coated on inside walls. Automobile brake	11

drum enclosed within box.	
Corrugated cardboard box with no corrosion inhibitor coating on inside walls. Automobile brake drum enclosed within box  (Control).	3

Photos enclosed

**Conclusion:** Corrugated cardboard box with Cortec VpCI-350A/VpCI-350B coated on inside walls, provided an increase in corrosion inhibitor protection of 38% over Corrugated cardboard box with Michelman Rustban 105 coated on inside walls.

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