



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@corotecvci.com](mailto:info@corotecvci.com)  
Internet <http://www.corotecvci.com>

## *Comparing Perkins Rust Preventatives to Similar Cortec Products for Diamond Manufacturing*

**Background:** Since 1915, Diamond Manufacturing has been providing original equipment manufacturers, job shops and architectural firms with quality perforated material. The Perkins metalworking fluids currently used by Diamond will be evaluated and compared to the corresponding Cortec products.

**Purpose:** To compare the corrosion inhibiting abilities of the currently used Perkins metalworking fluids to similar Cortec products.

**Method:** ASTM D-1748 Humidity cabinet

**Materials:** Perdraw drawing fluid, provided by Diamond Manufacturing  
Perkote 10-376C, provided by Diamond Manufacturing  
Perkote 80-322C-26, provided by Diamond Manufacturing  
VpCI-337  
VpCI-377  
EcoLine Cutting Fluid  
1010 Carbon steel panels

**Procedure:** The following procedure was used:

- 1) Carbon steel panels were cleaned with methanol prior to testing.
- 2) The following solutions were made:
  - a. Perdraw fluid, diluted 1:19 with water
  - b. Perkote 10-376C, used neat
  - c. Perkote 80-322C-26, used neat
  - d. VpCI-337, used as is
  - e. VpCI-377, diluted 1:19 with water
  - f. EcoLine Cutting Fluid, diluted 1:19 with water
- 3) Six panels were coated with one of the above solutions.
- 4) After coating, all panels were hung to dry overnight.
- 5) After drying, all panels were hung in ASTM D-1748 humidity cabinet.
- 6) Panels were visually inspected periodically.
- 7) After 288 hours, all panels were removed from ASTM D-1748 humidity cabinet.
- 8) All panels were visually inspected and photographed.



**Results:** The following results were found:

Panel	Time to Failure (Hours)
A	168
B	144
C	216
D	168
E	DNF*
F	DNF*
Control	24

DNF – Did not fail during 288 hours of testing.

**Conclusion:** VpCI-377 easily outperformed both of the Perkote products on carbon steel panels in ASTM D-178 humidity cabinet testing. VpCI-377 was used at a 5% solution in water, while the Perkote products were used as received.

Similarly, EcoLine cutting fluid outperformed Perdraw. Both of these products were used at 5% solution in water.

**Project #:** 08-015-1825



