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# Freeze - Thaw

— TEST No. TP01 —

## I. Scope

This test procedure is used to determine the resistance of the paint/polymer system used for the Texture Panels system against cold checking.

## **II. Materials and Equipment**

**a.** A combination humidity cabinet, convection oven and cold box or individual components capable of maintaining the following:

Humidity: 100% at 100 degrees F +/- 3.

Oven: 155 degrees F +/- 5. Cold Box: 20 degrees F +/-4.

**b.** Texture Panels production coated parts with barrier coat and top coat.

#### **III. Procedure**

- a. Age finished parts for 1 week at room temperature (77 degrees F)
- **b.** Place parts in a rack to allow air circulation between parts at the following cycles in individual test cabinets or a combination testing apparatus:

Humidity 16 hours

Cold Box 4 hours

Convection Oven 4 hours

Room Temperature 2 hours

Convection Oven 2 hours

- **c.** Each 24 hours of exposure equals one cycle.
- **d.** Examine the parts after each cycle for paint/polymer checking or cracking. Failure usually occurs as a series of irregular lines or fractures.

### IV. Report

- **a.** Report and record the condition of each test specimen following each cycle.
- **b.** More than two checks or cracks of more than 1-2 inches constitute a failure.
- **c.** A paint that passes 3 cycles is acceptable.
- **d.** Compare the test results against Texture Panels standard part.

#### V. Results

**a.** The parts tested passed. There were no checks or cracks in the Texture Panels samples tested.