

# 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 Plus® 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 Plus® 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 Plus® standard part.

#### V. Results

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

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