

# Humidity Test No. TP03

## **I. Scope**

This test procedure is used to evaluate the ability of the paint/polymer system used for the TextureFoam system in resisting degradation when exposed to 100% relative humidity.

## **II. Materials and Equipment**

- a. TextureFoam production coated parts with barrier coat and top coat.
- b. Humidity cabinet using distilled water with temperature control to maintain 100% humidity at 100 degrees Fahrenheit conforming to ASTM D2247.
- c. Scalpel or Sharp knife.

## **III. Procedure**

- a. Age finished parts for 1 week at room temperature (77 degrees F)
- b. Place 4 parts in humidity cabinet set at 100 degrees Fahrenheit and 100% humidity and pull each part at the following rates:
  1. beginning at 48 hours, pull the first part
  2. at 72 hours, pull the second part
  3. at 96 hours, pull the third part
  4. check the fourth part every 24 hours until failure
- c. Inspect parts between 5 and 10 minutes after removal from humidity cabinet, rate and record blistering or paint deterioration per ASTM D714.
- d. Allow 12 hour recovery time and re-inspect the parts, rate and record per III. b.
- e. Check adhesion per Test No. TP05.
- f. Take the reading of CIE L\*a\*b\* values before and after the test, record these values.

## **IV. Report**

- a. Report the paint/polymer coating appearance at the 5-10 minute period after part removal and after 12 hour recovery period on both part substrates.
- b. Report the size and amount of blistering using ASTM D714 as the reference..
- c. The paint/polymer coating passes if the size and quantity of of blistering is #6 few and less, adhesion is 3b or less and there are no other visual film defects.
- d. Compare test results to TextureFoam standard parts.

## **V. Results**

- a. The parts tested passed. There were no blisters or imperfections on the TextureFoam samples tested. No color shift noted.