



# Florida Method of Test For Anti-Graffiti Coating Materials

Designation: FM 5-580

## 1. SCOPE

This method covers the field test for sacrificial and non-sacrificial water cleanable anti-graffiti coating materials. This includes the procedure for direct exposure of nonmetallic materials to the environment as described in **ASTM G7**.

## 2. REFERENCES

ASTM G7 – Atmospheric Environmental Exposure Testing of Non-metallic Materials

## 3. EQUIPMENT

- 3.1 Marking materials will include at least one acrylic, one polyurethane, and one alkyd. The preference for colors will be red, black, then blue.
- 3.2 Weather recording equipment capable of recording ambient temperature, relative humidity, and rain fall.
- 3.3 Pressure washer capable of delivering water at 2700 psi and 2.3 gallons per minute.
- 3.4 Manufacturer's specific graffiti removal equipment and supplies (for sacrificial systems only).

## 4. SAMPLE PREPARATION

- 4.1 For product evaluation, manufacturers seeking approval of anti-graffiti coating materials shall submit four, 4-inch by 8-inch fiber cement test panels to the State Materials Office (SMO). The coating material must be applied to the panels by the manufacturer prior to their arrival at the SMO.
- 4.2 Mark one test panel with the acrylic paint. Include one line of each color. Make lines approximately one inch wide and at least one inch apart (**Figure 1**).

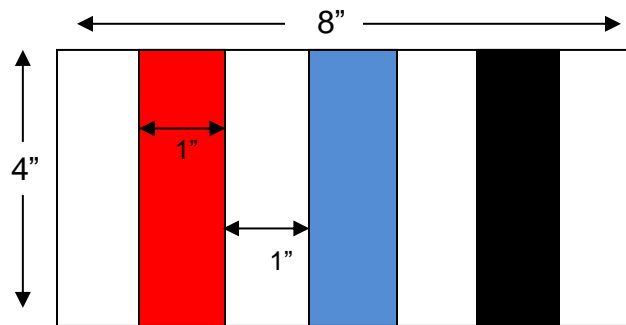


Figure 1

- 4.3 Mark the back of the panel with the product identification information and the type of paint used. The marking must be durable enough to withstand the exposure period.
- 4.4 Repeat steps 4.2 and 4.3 for the polyurethane and alkyd paints.

## 5. OUTDOOR EXPOSURE

- 5.1 Install the test panels at the Department's Florida Keys outdoor test site in accordance with **ASTM G7**. Record the installation date as the exposure start date. Keep the unmarked panel at the State Materials Office as a reference sample.
- 5.2 Photograph the panels.
- 5.3 Allow the panels to remain exposed at the test site for a period of six months  $\pm$  2 weeks.

## 6. GRAFFITI REMOVAL TESTING

- 6.1 After the exposure period, remove the test panels from the test racks and return them to the SMO. Record the date that the panels are removed as the exposure end date.
- 6.2 Photograph the panels prior to cleaning.
- 6.3 **Non-Sacrificial** – Within 7 days of the exposure end date, clean the panels with pressurized water. The water shall not be heated prior to filling the reservoir. The temperature of the water should not exceed 50°C. Record the date that the panels are cleaned as the test date.



- A. Adjust the nozzle of the pressure washer to deliver a 15° stream pattern.
- B. Position the nozzle 3 to 6 inches from the face of the panel at a 90° angle.
- C. Wash each panel for 1 minute ± 5 seconds making 70 to 80 passes over the panel.
- D. Evaluate the panel for cleanliness. Document whether the graffiti is removed or not.

**Sacrificial** – Within 7 days of the exposure end date, clean the panels per the manufacturer’s instructions. Record the date the panels are cleaned as the test date.

- 6.4 Photograph the panels after cleaning.
- 6.5 Record observations regarding graffiti removal. Include information identifying which paint types and colors were not completely removed, if any. For non-sacrificial coatings, note any delamination or visual defects.

## 7. REPORTING

- 7.1 Report the following information with reference to exposures conducted according to this practice:
  - A. Exposure start date
  - B. Exposure end date
  - C. Test date
  - D. Graffiti removal results
  - E. Photographs (initial, post-exposure, and post-cleaning)
- 7.2 Report any deviations from this method.