

KTMR-12 DRY TO NO-PICK-UP TIME FOR WATER-BORNE TRAFFIC PAINT
(Kansas Central Lab Test KTMR-12)

a. SCOPE

This test method is a laboratory procedure to determine the dry to no-pick-up time for water-borne traffic paint by a rubber wheel.

b. REFERENCED DOCUMENTS

b.1. ASTM D711; Test Method for No-Pick-Up Time of Traffic Paint

c. SUMMARY OF THE METHOD

Three atmospheric conditions affect the drying time of water-borne traffic paint. These conditions which have direct effects on the evaporation of water from the paint are: air flow, temperature, and relative humidity. This method eliminates the influence of air flow and permits drying time evaluation as a function of temperature and relative humidity. Of these two, relative humidity has a more significant effect on the drying time.

d. APPARATUS

d.1. Test chamber (Figure 1).

d.2. Combination hygrometer and temperature indicator.

d.3. Equipment as described in ASTM D711.

e. PROCEDURE

e.1. Beneath the grate, in the bottom of the test chamber, place a large piece of folded cheesecloth or other absorbent towel that has been dampened with water. Close the door and all ports. Allow to equilibrate at $73.4^{\circ} \pm 3.5^{\circ}$ F ($23 \pm 2^{\circ}$ C).

e.2. Open or close the ports to establish a relative humidity of $65 \pm 3\%$ in the chamber. Note: Add water to the cheesecloth or towel if the relative humidity is too low. Put a pan of desiccant in the chamber if the relative humidity is too high.

e.3. Heat the paint and a clean 4.5 X 9 in (114 by 229 mm) glass panel to 120° F (49° C).

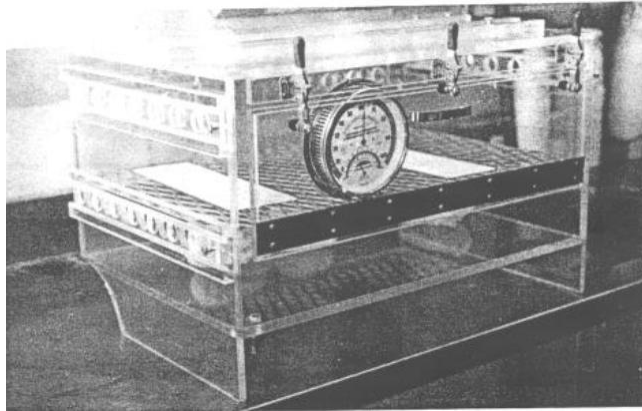
e.4. Apply a stripe of paint using a 0.012 in (0.305 mm) wet film thickness steel bar (blade). Start the stopwatch.

e.5. Place the panel into the test chamber. Adjust the side ports of the test chamber to re-establish a 65% relative humidity.

e.6. After 3 minutes elapsed time, quickly remove the test panel and proceed to test for "Dry to no-pick-up" as described in ASTM D711. If the sample fails, quickly return the panel to the test chamber as in Step **e.5**.

e.7. Retest the sample at one-minute intervals until no paint adheres to the rubber rings of the test wheel.

e.8. Report the elapsed time in minutes between the application of the paint and the end point as the "Dry to no-pick-up" time.



Laboratory Drying Chamber
FIGURE 1