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FORD LABORATORY TEST METHOD BI 104-02

CONDENSING WATER VAPOR TEST

Application

This procedure is used to evaluate the effects of a condensing water atmosphere on treated panels. The nature of this test requires that it be used on flat panels which form a roof for the condensing fog.

Apparatus Required

Cleveland Condensing Cabinet

Source: Q-Panel Co.
15610 Industrial Parkway
Cleveland, OH 44135
(216) 267-9200

Glass Panels - 100 x 200 mm

Glass panels are required as blanks.
Stainless steel is not recommended due to possible galvanic corrosion.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure "A"

1. Panels to be tested are placed on the frame provided to act as a roof of the condensing cabinet.
2. The roof frame shall be inclined at 60° unless otherwise specified.
3. Air temperature inside the cabinet shall be maintained at 43 +/- 2 °C.
4. Air temperature of panel back shall be 23 +/- 2 °C.

Date	Action	Revisions
2001 03 14	Revised	Editorial – no technical change A. Cockman
1994 04 15		

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5. Turn on unit. Add 20 liters of deionized water and adjust heater input control to "Hi" position. Set operating temperature with thermostat control.

6. Place panels to be tested on the rack provided. All slots must be covered with test panels or glass blanks. Panels should be placed so that dissimilar metals do not touch in order to eliminate galvanic action.

7. Expose the panels to the number of hours of wet condensate as indicated in the applicable Engineering Materials Specification. Blow off condensate with air to remove condensate and examine for occurrence of film failure, i.e. dulling, blistering or loss of adhesion.

Procedure "B"

This procedure differs from the preceding in that the panels are exposed to alternating cycles of condensation and drying.

1. Perform Steps 1 thru 6 as indicated previously.

2. Expose the panels for 23 hours to condensing humidity and for 1 - 2 hours of drying by setting automatic dry-off times with timer, and dry-off air temperature with dry-off heat input control.

3. Manual dry-off can be accomplished by removing test frame or placing panels on T-bar to dry.

4. Continue test by replacing panels on frame and re-exposing to condensate.

5. Panels shall be cycled, wet and dry, as required, and examined for film failure.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

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