

NATIONWIDE CHEMICAL COATING MFRS., INC.

PROJECT REPORT

Salt Spray (Fog) Testing ASTM B-117-97

Report #: 0901PFB, September 2001

1.0 SCOPE

This test method employs photographic reference standards to evaluate the degree of blistering that may develop when paint systems are subjected to conditions which will cause blistering. While primarily intended for use on metal and other nonporous surfaces, this test method may be used to evaluate blisters on porous surfaces, such as wood, if the size of the blisters falls within the scope of these reference standards. When the reference standards are used as a specification of performance, the permissible degree of blistering of the paint system shall be agreed upon by the purchaser and the seller.

2.0 SIGNIFICANCE and USE

A phenomenon peculiar to painted surfaces is the formation of blisters relative to some system weakness. This test method provides a standard procedure of describing the size and density of the blisters so that comparisons of severity can be made.

3.0 REFERENCE STANDARDS

The photographic reference standards are glossy prints. Figures 1 to 4 are reproductions of these standards and are included to illustrate two characteristics of blistering size and frequency.

Size – Reference standards have been selected for four steps as to size on a numerical scale from 10 to 0, in which No. 10 represents no blistering. Blistering standard No. 8 represents the smallest size blister easily seen by the unaided eye. Blistering standards Nos. 6, 4, and 2 represent progressively larger sizes.

Frequency – Reference standards have been selected for four steps in frequency at each step in size, designated as follows:

Dense
Medium Dense
Medium
Few

4.0 TESTING PROCEDURE

The apparatus required for salt spray (fog) testing consists of a fog chamber, a salt solution reservoir, a supply of suitably conditioned compressed air, one or more atomizing nozzles, specimen supports, provision for heating the chamber, and necessary means of control. A scratch or scribed line shall be made through the coating with a sharp instrument so as to expose the underlying metal before testing. The salt solution shall be prepared by dissolving 5 ± 1 parts by weight of sodium chloride in 95 parts of water.

5.0 RESULTS

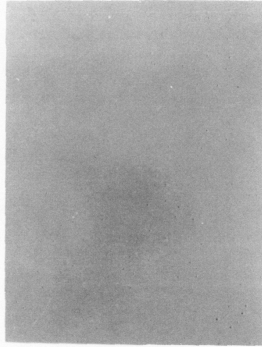
Samples for Testing (All samples scribed on side prior to placing in salt fog apparatus.)		
Sample Identification	Observations After 1 Week	Observations After 3 Weeks
Permakote	#6 Dense On Panel #4 Medium At Scribe	#6 Dense On Panel #4 Medium At Scribe
Permakote Plus	#4 Medium On Panel	#4 Medium On Panel #4 Medium At Scribe
Snowbrite	#2 Medium Dense	#2 Medium Dense
Ultraseal	#6 Few At Scribe	#6 Few At Scribe
Control Sample Gloss White - Industrial Oil Based High Performance Enamel	# 8 Medium At Scribe Slight Staining	#6 Medium At Scribe Staining

Pictorial Standards Of Coatings Defects (Previously Published as "Exposure Standards Manual")

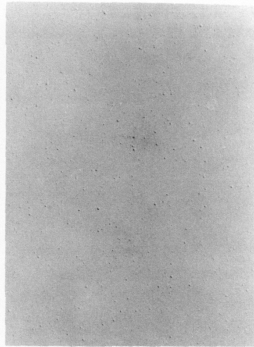
Compiled and Updated by
Philadelphia Society for Coatings Technology (Pictorials Standards Sub-Committee, R.C. Sonntag - Chairman)

In Conjunction with
Sub-Committee D 01.25 on Pictorial Standards of Coatings Defects (Stanley LeSota - Chairman) of the American Society for Testing
and Materials.

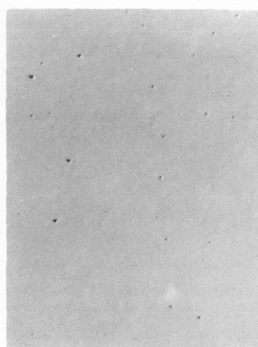
Federation of Societies for Coatings Technology
1315 Walnut Street, Suite 832, Philadelphia, PA 19107



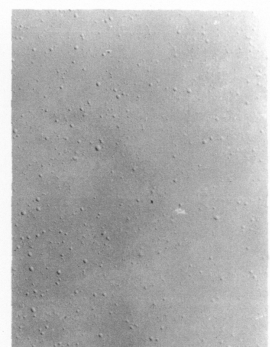
Few



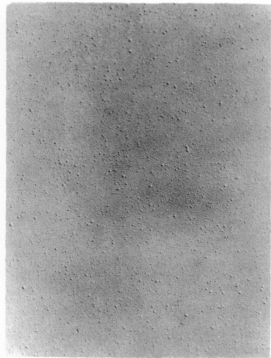
Medium



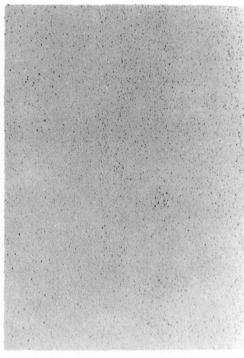
Few



Medium

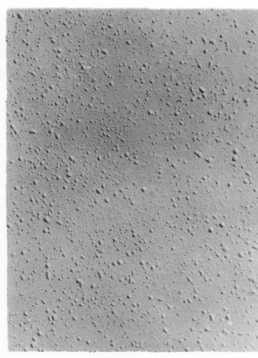


Medium Dense

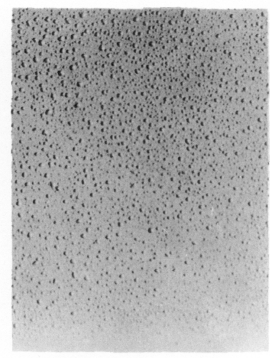


Dense

Blister Size No. 8

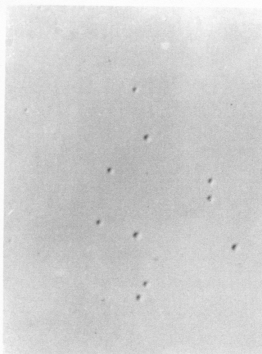


Medium Dense

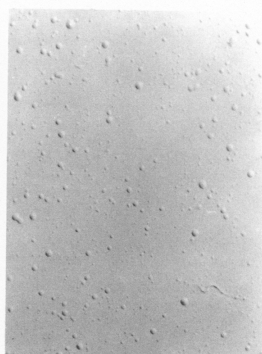


Dense

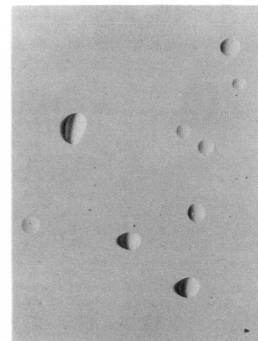
Blister Size No. 6



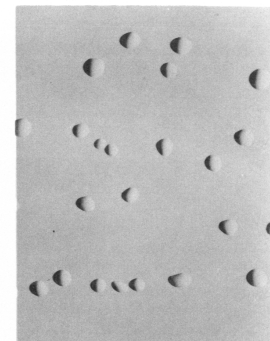
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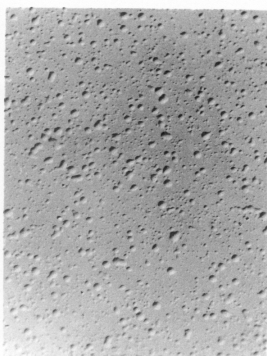
Medium



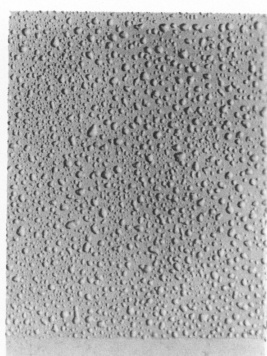
Few



Medium

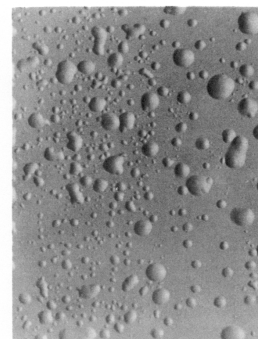


Medium Dense



Dense

Blister Size No. 4



Medium Dense



Dense

Blister Size No. 2