

HIGH PERFORMANCE STONE CHIP RESISTANCE TEST NEW RATING SCALE

Application

This test method is used to determine the resistance of paint, on exterior body surface, to stone chipping.

Apparatus Required

Stone Chip Resistance Tester

VDA Model 508

Source: Erichsen GmbH and Co. KG or Pearson Panke Ltd.
 D-5870 Hemer-Sundwig 1-3 Halegrove Gardens
 Germany London NW7 3LR
 England

or equivalent

Evaluation Standards

8 black and white photographs

Source: Central Laboratory
 Ford-Werke AG
 D-5000 Koln
 West Germany

Test Panels

Plane surface, prepared and painted in accordance with the applicable Engineering Material Specification, minimum dimension 200 x 100 mm. The coating thickness is to be determined according to FLTM BI 117-01 or as otherwise specified.

Materials Required

Chilled Iron Grit "Diamant"

Angular, 4 - 5 mm in size, rust free

Source: Eisenwerke Wurth GmbH
 D-7101 Bad Friedrichshall/Jagstfeld
 Germany

Date	Action	Revisions
2001 03 20	Revised	Editorial – no technical change A. Cockman
1996 10 02		

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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

1. Age test panels according to applicable Engineering Material Specification.
2. Grit blast the test panels for a period of 30 to 35 seconds with 2000 g of the grit using an air pressure setting of 2 bar at 23 +/- 2 °C.
3. Perform water immersion test according to BI 104-01 for 72 hours.
4. Repeat the grit blasting as specified under procedure 2 within one hour of removing the panel from water immersion.
5. Evaluate by comparison with Evaluation Standards Photographs.
6. All chipping shall be reported. Where possible identify and record the plane in the paint layers where chipping occurs.

General Information

1. For special tests (e.g.) initial sample, perform the test in triplicate and report the average result.
2. The stone chip resistance equipment shall be standardized periodically for effectiveness. If necessary, the air pressure shall be adjusted to correlate with the standards on file at the Materials Laboratory of Product Engineering.
3. To avoid aerodynamic resistance ensure that the end of the flexible outlet has a ground clearance of at least 50 mm.
4. Ensure that the grit will produce consistent results.

Check grit weight before starting test and subsequently, every 25 cycles, remove used grit to give a weight of 1950 g and make up weight to 2000 g with new grit. Where loss in use reduces the weight to less than 1950 g do not remove any used shot but make up to 2000 g.

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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