

HIGH PERFORMANCE STONE CHIP RESISTANCE TEST

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
D-5870 Hemer-Sundwig
Germany

or Pearson Panke Ltd.
1-3 Halegrove Gardens
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.

Date	Action	Revisions
2001 03 20	Revised	Editorial – no technical change A. Cockman
1991 08 27		

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Page 1 of 5

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Materials Required

Chilled Iron Grit "Diamant"

Angular, 4 - 5 mm in size, rust free

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

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.