

Certificate of Test

Title:
TRITON CHEMICAL MANUFACTURING
Adhesion Testing of Triton TT-55
Coated System

Certificate of Test No: 5719

Client's Name & Address:

Triton Chemical Manufacturing
Triton House
Lyndean Industrial Estate
129 Felixstowe Road
Abbeywood
London, SE2 9SG

Our Ref: 231S/SPJ/JM/067b
TEL Job No: 6729
Your Ref: 4126/99F
Date: 1st September, 1999
Date Sample(s) Received: 4th May, 1999
Sample(s) Received From: Triton Chemical

Sample No(s): 126176/3

Tested By: *S Stoute* S Stoute

Authorised By: *A T Blake* A T Blake

For

TAYWOOD ENGINEERING
CONSULTANTS IN DESIGN AND TECHNOLOGY

Technology
345 Ruislip Road, Southall, Middlesex, UB1 2QX
Tel. No. 0181 - 578 2366 Fax No. 0181 - 575 4215
Registered Office Southall Registered No. 1090601 England



This Certificate of Test is copyright. Reproduction of the whole or any part thereof must not be made without the express permission of Taywood Engineering.

This Certificate and the results shown are based upon the information drawings samples and tests referred to herein.

Taywood Engineering accepts no liability for any damages, charges costs (including, but not limited to, legal costs) or expenses in respect of or in relation to any damage to any property or other loss (save for death or personal injury occasioned by reason of any negligence on the part of Taywood Engineering) whatsoever arising directly or indirectly from the use of any goods or materials referred to in this Certificate of Test.

1. SAMPLE REQUIREMENTS

Approximately 3.5kg of Triton TT-55 was received for bond strength determination on a concrete substrate.

2. METHOD**2.1 Sample Preparation**

One coat of Triton TT-55 was trowel applied at an application rate of 3kg/m^2 on to a concrete paving slab from which the surface laitance had been removed by using a stiff brush. A second coat was applied at right angles to the first, 24 hours later, at a rate of 3kg/m^2 .

The coating was cured for three days at $23\pm 2^\circ\text{C}$ in a plastic bag and conditioned for fourteen days at $23 \pm 2^\circ\text{C}$ and $60 \pm 5\% \text{RH}$.

When cured and conditioned the coating was cored through to expose the concrete substrate in randomly selected test areas, at a diameter of 50mm. These areas were then briefly washed clean, dried and gently wiped with a propriety solvent (Genklene). The test surfaces of several 50mm diameter aluminium dollies were also cleaned, using abrasive paper, soapy water, clean water and finally solvent washing.

2.2 Adhesion Testing

The test dollies were adhered to the prepared test surfaces using a quick setting epoxy resin. The tensile pull-off failure loads were then measured using a 'Limpet' test apparatus.

3 RESULTS

The results of the test are detailed in Table 1.

ADHESION TEST RESULTS

Table 1

T.E.L. SAMPLE NUMBER	SURFACE AREA (mm ²)	FAILURE LOAD (kN)	FAILURE LOAD (MPa)	MODE OF FAILURE
126176/3A	1947.82	4.36	2.24	20% Coating/concrete adhesive failure 80% Coating cohesive failure
126176/3B	1947.82	2.26	1.16	60% Coating/concrete adhesive failure 40% Coating cohesive failure
126176/3C	1947.82	2.60	1.33	30% Coating/concrete adhesive failure 70% Coating cohesive failure

Date tested:- 18.08.99.

The above failure modes are all categorised as a "mixed" failure. This is where failure occurs at the concrete interface and within the coating.