Certificate of Test

Title:

SAFEGUARD CHEMICALS LTD

Water Permeability Determination

SWS Grey + Bondaid Coated Concrete

Certificate of Test No: **6477**

Client's Name & Address:

Safeguard Chemicals Ltd
Redkiln Close
Redkiln Way
Horsham
Sussex, RH13 5QL

Our Ref:	N956/AML/JM/177
TEL Job No:	6CB5
Your Ref:	-
Date:	5th December, 2001
Date Sample(s) Received:	22nd October, 2001
Sample(s) Received From:	Mr D White

Sample No(s): **129137 and 129373**

Tested By: ..... A McLintock

Authorised By: ..... A T Blake

Job Title: **Manager, Analytical Laboratories**

for

TAYWOOD ENGINEERING
CONSULTANTS IN DESIGN AND TECHNOLOGY

Technology
345 Ruislip Road, Southall, Middlesex, UB1 2QX
Tel. No. 020 8578 2366 Fax No. 020 8575 4215
Registered Office Southall Registered No. 1090601 England

1. SAMPLE DETAILS

Two 100mm diameter concrete disc samples, one coated, one uncoated, were received by the Analytical Laboratories. The concrete disc substrates were supplied by Taywood Engineering to Safeguard Chemicals Ltd, who applied SWS grey + Bondaid coating material to one substrate only.

The samples were conditioned in laboratory ambient conditions for 28 days before testing.

The uncoated substrate was to be tested for control purposes only.

Taywood Engineering were requested to determine the negative resistance to water permeability of the samples with increasing pressure until failure, i.e. passage of water through the concrete to the coating.

2. METHOD

2.1 Sample Preparation

The sides of the samples were sealed with epoxy resin, by placing in a circular mould and filling the annular space with a cold curing epoxy resin. When the resin had cured, the specimens were demoulded and their water permeability determined.

2.2 Water Permeability Determination

The procedure followed was to apply water, increasing in pressure at a rate of 1 bar per day up to 10 bar or failure. This pressurised water was applied to the underside (uncoated surface) of the sample.

A diagram of the test equipment is shown in Figure 1. The testing was undertaken in the laboratory at 23 ± 2°C and ambient Relative Humidity.

3. RESULTS

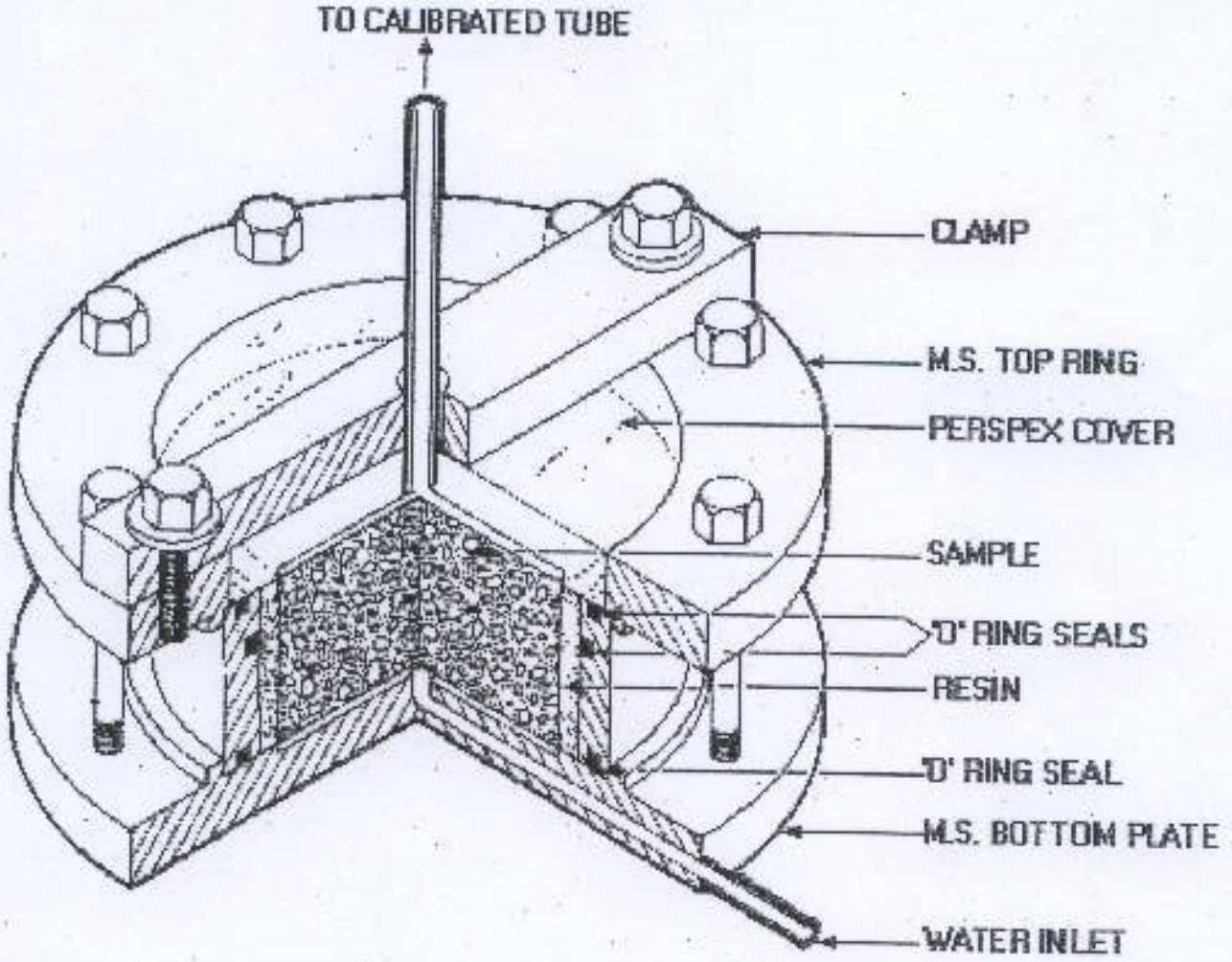
Table 1

DATE	TIME	PRESSURE (BAR)	129137 CONTROL	129373 SWS GREY + BONDAID
21.11.01	11.00	1	Start	Start
22.11.01	08.00	1	Water on surface	-
22.11.01	11.00	2		-
23.11.01	11.00	3		-
26.11.01	08.45	3		Surface damp at edge
26.11.01	11.00	4		No change
27.11.01	09.00	4		Water on surface
27.11.01	11.00	5		No change

Remarks: The coating, SWS grey + Bondaid, failed at 4 bar pressure, equivalent to 40 metre head of water.

WATER PERMEABILITY TEST

FIGURE 1



END OF CERTIFICATE