Test Report No. S08EEC02765/HHH/PCA
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Subject

SURFACE RESISTIVITY AND VOLUME RESISTIVITY TESTS ON FIBREGLASS LADDER

Client

Super-K Marketing
Block 1007, Tai Seng Avenue
#01-2616
Singapore 534411

Attn: Mr. Tng Paul

Sample Submission Date

30-09-2008

Description of Samples

Fibreglass ladder

Quantity	:	6 pieces (Labelled as A1 to A6)
Dimensions	:	3 mm(T) x 79mm(W) x 140mm(L)

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Method of Test

1. Surface Resistivity Test – ASTM-D257

1.1 The test was conducted as follows :-

Step 1 : Samples (A1 to A6) were conditioned in a environmental humidity chamber at 23^{O}C±3 ^{O}C with 50%±3%RH for a duration of 40 hours.

Step 2 : At the end of the conditioning, the surface resistance of each sample was measured by applying 500V dc for a duration of 60 seconds.

2. Volume Resistivity Test – – ASTM-D257

2.1 The test was conducted as follows :-

Step 1 : Samples (A1 to A6) were conditioned in a environmental humidity chamber at 23^{O}C±3 ^{O}C with 50%±3%RH for a duration of 40 hours.

Step 2 : At the end of the conditioning, the volume resistance of each sample was measured by applying 500V dc for a duration of 60 seconds.

Results

1. Surface Resistivity Test

Sample Description **Fibreglass ladder**		Voltage Applied (VDC)	Surface Resistivity (ohms/squares)
Sample A1	Side A	500 V	1.268×10^{14}
	Side B		4.978×10^{14}
Sample A2	Side A	500 V	4.231×10^{14}
	Side B		1.111×10^{14}
Sample A3	Side A	500 V	2.716×10^{14}
	Side B		1.152×10^{14}
Sample A4	Side A	500 V	1.191×10^{14}
	Side B		5.939×10^{12}
Sample A5	Side A	500 V	9.061×10^{13}
	Side B		7.706×10^{13}
Sample A6	Side A	500 V	1.053×10^{14}
	Side B		6.041×10^{13}

	Surface Resistivity (ohms/squares)	
Type of Value	Side A	Side B
Minimum Value	9.061×10^{13}	5.939×10^{12}
Maximum Value	4.231×10^{14}	4.978×10^{14}
Average Value	1.894×10^{14}	1.446×10^{14}

Results –Cont'd

2. Volume Resistivity Test

Sample Description **Fibreglass ladder**	Thickness, t (cm)	Measured Volume Resistance, Rv (ohms)	Volume Resistivity, Pv (ohm-cm)
Sample A1	0.3	6.239×10^{12}	1.435×10^{14}
Sample A2	0.3	7.567×10^{12}	1.740×10^{14}
Sample A3	0.3	1.508×10^{13}	3.468×10^{14}
Sample A4	0.3	8.496×10^{12}	1.954×10^{14}
Sample A5	0.3	9.777×10^{12}	2.249×10^{14}
Sample A6	0.3	7.899×10^{12}	1.817×10^{14}

	Volume Resistivity, Pv (ohms-cm)
Minimum Value	1.435×10^{14}
Maximum Value	3.468×10^{14}
Average Value	2.110×10^{14}

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Remarks

1. The samples were returned to the submitter after the test for further evaluation.

HO HOCK HENG
TESTING OFFICER

PATRICK CHUA
TEAM LEADER
ENVIRONMENTAL & RELIABILITY
TESTING SERVICES

PSB Singapore

Appendix 1

Test equipment used

1. Environmental Humidity Chamber
Make : Prostat

2. Ultra High Resistance Meter
Make : Advantest
Model : R8340

4. Concentric Ring Fixture
Make : Prostat
Model : PRF-911

5. NFPA Electrode
Make : Prostat
Weight : 2.27 kg

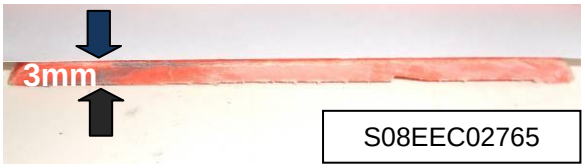
Appendix 2

General views of sample - Fibreglass ladder

1. **General view Side A**

2. **General view Side B**

3. **General view of thickness of the sample**



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