

1B73 Conformal Coating test summary according IEC61086

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1. Executive Summary

HumiSeal 1B73 coating type was tested according IEC 61086, class 2.

HumiSeal 1B73 coating is acrylic type conformal coating. Humiseal manufacture various pre-blended varieties of 1B73 using a variety of solvent types and final coating liquid viscosity. The properties of all 1B73 materials after full cure are equivalent. Thus, as such, this report is applicable to all following materials:

1B73 – and all dilutions/pre-blends

1B73EPA – and all dilutions/pre-blends

1B73LED – and all dilutions/pre-blends. LED version does not contain optical brightener.

Tests boards were coated in HumiSeal's laboratories in Winnersh UK.

Testing according IEC 61086-2 were conducted at:

- National Technical Systems – Baltimore (USA)
- UL laboratories – New York (USA).
- Environmental Test Services Limited Laboratory - Reading (UK)

The Test Substrates met all conditions/requirements, confirming the qualification of 1B73, 1B73LED and 1B73EPA products for IEC61086 Class 2

Detailed test reports:



PR107527 Humiseal Europe LTD Test Repc



IEC 61086_Salt Mist Test 1B73 .pdf



Flammability 1B73 UL.pdf

2. Summary of the Test Results

Test	Sample	Stage	Results
Specimens A			
Cleanliness	20	Before coating	Met the requirements
Coating, Thickness	10	Before coating	Measurements taken on pads 1 - 8
Coating	20		
Visual Inspection	20	After coating	Met the requirements
Thickness	20	After coating	Met the requirements
Fluorescence	20	After coating	Met the requirements
Thermal Cycling Exposure	20		
Visual Inspection	20	After exposure	Met the requirements
Thermal Shock Exposure	20		
Visual Inspection	20	After exposure	Met the requirements
Damp Heat (Moisture Resistance)	5		
Insulation Resistance	5	During exposure	Arithmetic Mean Range: $9.0 \times 10^{11} - 4.0 \times 10^{12} \Omega$. Lowest Value: $5 \times 10^{11} \Omega$
Breakdown Voltage	5	After exposure	Lowest breakdown voltage 10.1 kV
Thermal Aging	5		
Visual Inspection	5	After exposure	Met the requirements
Insulation Resistance	5	During exposure	Arithmetic Mean Range: $8.0 \times 10^{11} - 3.0 \times 10^{12} \Omega$. Lowest Value: $1 \times 10^{11} \Omega$
Breakdown Voltage	5	After exposure	Lowest breakdown voltage 9.9 kV
Salt Mist			
Insulation Resistance	5	During exposure	Arithmetic Mean Range: $5.8 \times 10^{10} - 6.8 \times 10^{10} \Omega$. Lowest Value: $1.1 \times 10^{10} \Omega$
Breakdown Voltage	5	After exposure	Lowest breakdown voltage 10.6 kV
Specimens B			
Cleanliness	15		Met the requirements
Coating	15		
Visual	5	After coating	Met the requirements
Tackiness	5	After coating	Met the requirements
Flexibility	5	After coating	Met the requirements
Thermal Shock	5		
Visual Inspection	5	After exposure	Met the requirements
Flexibility	5	After exposure	Met the requirements
Thermal Aging	5		
Visual Inspection	5	After exposure	Met the requirements
Flexibility	5	After exposure	Met the requirements
Specimens C			
Cleanliness	5	Before coating	Met the requirements
Coating	5		
Visual Inspection	5	After coating	Met the requirements
Mould Growth, Visual Inspection	5	After coating	Met the requirements
Specimens D			
Visual Inspection	5	After coating	Met the requirements
Flammability	5	After coating	Met V-0 rating (UL File Number E105698)