Material & Engineering Laboratory-Taipei

TEST REPORT

REPORT NO.: HV-10-06932XA
PAGE: 1 OF 10
DATE: NOVEMBER 18, 2010

PROWANG PLASTIC CO., LTD.
NO.55, FENGTIAN RD., DAPI SHIANG,
YUNLIN COUNTY 63147, TAIWAN (R.O.C)

The following merchandise was submitted and identified by the vendor as:

Product Description： PVC FOAM SHEET、PLAWOOD
Style/Item No.： L-550、W-800
Manufacturer/Vendor： PROWANG PLASTIC CO., LTD.
Country of Origin： Taiwan

We have tested the submitted sample(s) as requested and the following results were obtained：

Test Required： (According to client's test specification, please see following sheets in detail.)

(1) Vicat Softening Temperature
(2) Heat Deflection Temperature
(3) Coefficient of Linear Thermal Expansion
(4) Thermal Conductivity
(5) Water Absorption
(6) Breakdown Voltage
(7) Surface Resistivity
(8) Volume Resistivity

Test Result： -PLEASE SEE ATTACHED SHEETS-

Date of Receive： OCTOBER 27, 2010

Date of Testing： OCTOBER 27, 2010 ~ NOVEMBER 17, 2010

Signed for and on behalf of SGS Taiwan Ltd.

Given Chang
Given Chang
Manager

(1)Vicat Softening Temperature

Test Equipment:

Name	Brand	Model
Deflection Temperature Tester	CEAST	6911

Lab Environmental Conditions:

Ambient temperature: 23±2℃

Relative humidity: 50±5%RH

Test Method/ Specification:

ASTM D1525-09 Standard Test Method for Vicat Softening Temperature of Plastics

Test Condition:

Load: 10 N

Size of the Specimens: 10mm×10mm

Rate of the Heat: 120℃/hr

Test Result:

L-550： 73.9 ℃

W-800： 107.8 ℃

(2)Heat Deflection Temperature

Test Equipment:

Name	Brand	Model
Deflection Temperature Tester	CEAST	6911

Lab Environmental Conditions:

Ambient temperature: 23±2℃
Relative humidity: 50±5%RH

Test Method/ Specification:

ASTM D648-07 Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position (Procedure B)

Test Condition:

Load:	66 psi
Size of the Specimens:	127mm×13mm
Rate of the Heat:	120℃/hr
Support Span：	100 mm
Diameter of the loading nose and supports：	6 mm

Test Result:

L-550： 70.8 ℃
W-800： 84.7 ℃

(3)Coefficient of Linear Thermal Expansion

Test Equipment:

Name	Brand	Model
TMA (Thermomechanical Analyzer)	TA	Q400

Lab Environmental Conditions:

Ambient temperature: 23±2℃
Relative humidity: 50±5%RH

Test Method/ Specification:

Refter to ASTM D696-08 Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C With a Vitreous Silica Dilatometer

Test Conditions:

The Rate of Temperature: 10℃/min
The Scan Range of Temperature: -30~50℃
Size of the Specimens: 10mm×10mm

Test Result:

L-550： 6.583×10^{-5} 1/℃
W-800： 13.14×10^{-5} 1/℃

(4)Thermal Conductivity

Test Equipment：

Name	Brand	Model
Heat flow meter	NETZSCH	Lambda 2300V

Lab Environmental Conditions：

Ambient temperature: 23±2℃
Relative humidity: 50±5%RH

Test Method/ Specification：

ASTM C518-04 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

Test Condition：

Average Temperature: 60±5 ℃
Size of the Specimens: 300mm×300mm

Test Result：

L-550： 0.0768 W/m·K
W-800： 0.1256 W/m·K

(6)Breakdown Voltage

Test Equipment：

Name	Brand	Model
Super Megohmmeter	HIOKI	SM-8220
Resistivity Cell	HIOKI	SME-8310

Lab Environmental Conditions：

Ambient Temperature：23±2℃

Relative Humidity： 50±5%RH

Test Method：

JIS K6911(1995) Testing methods for thermosetting plastics

Test Condition:

Size of the Specimens: 200mm×200mm

Test Result：

L-550： 2.15 kV/mm

W-800： 4.08 kV/mm

(7)Surface Resistivity

Test Equipment：

Name	Brand	Model
High Resistance Meter	Agilent	4339B
Resistivity Cell	Agilent	16008B

Lab Environmental Conditions：

Ambient Temperature：23±2℃

Relative Humidity： 50±5%RH

Test Method：

ASTM D257-07 Standard Test Methods for DC Resistance or Conductance of Insulating Materials

Test Condition：

Voltage： 500 V

Time： 60 sec

Size of the Specimens: 100mm×100mm

Test Result：

L-550： 8.4083×10^{15} Ω

W-800： 2.6599×10^{16} Ω

(8)Volume Resistivity

Test Equipment：

Name	Brand	Model
High Resistance Meter	Agilent	4339B
Resistivity Cell	Agilent	16008B

Lab Environmental Conditions：

Ambient Temperature： 23±2℃

Relative Humidity： 50±5%RH

Test Method：

ASTM D257-07 Standard Test Methods for DC Resistance or Conductance of Insulating Materials

Test Condition：

Voltage： 500 V

Time： 60 sec

Size of the Specimens: 100mm×100mm

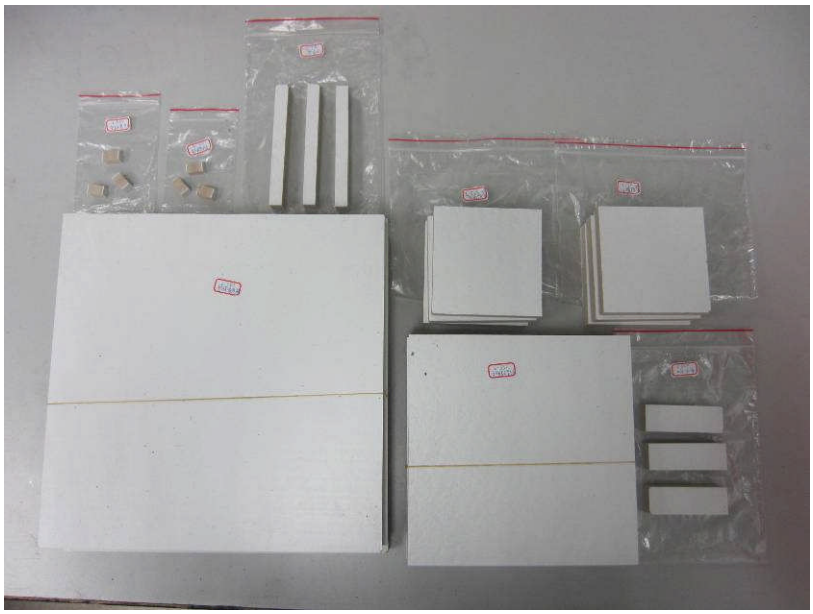
Test Result：

L-550： 2.4041×10^{15} Ω・cm

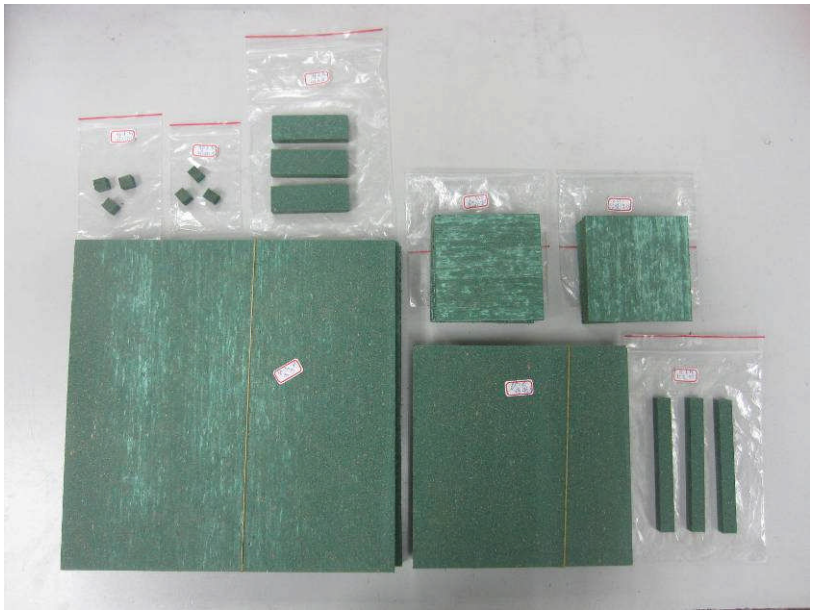
W-800： 1.5304×10^{16} Ω・cm

TEST REPORT

Test Photo：



L-550



W-800

－The End of Test Report－