



SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & OHSAS 18001 Certified Institute

Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org

TEST CERTIFICATE

NO.: C1/0000015497

Issued To:

Client Code : A0421
ALUDECOR LAMINATION PRIVATE
LIMITED,
SUIT NO. 52, 5TH FLOOR,
IRN MUKHERJEE ROAD,
KOLKATA
WEST BENGAL-700001
Kind Attn: MR. PARVEEN MAHAJAN

Date 12/10/2015

Job No. 1509-1-141-3949

Booking No. RG1516/1/5973

Booking Date 29/09/2015

Customer Ref No. -

Customer Ref Date 29/09/2015

Sample Description :


ONE SAMPLE DESCRIBED AS ALUMINIUM COMPOSITE PANEL (ACP), 4 MM ZINC COMPOSITE PANEL, MARKED AS AL-45 ZINC WITH 0.5MM THICK ALUMINUM COIL, WAS RECEIVED.

The sampling was not carried out by Shriram Institute for Industrial Research. The sample details provided in the test certificate are based on the declaration by the party.

S.No	Tests	Results	Protocol Adopted
1	Flexural Modulus, MPa	12462	ASTM D-790-08
2	Shear Strength, MPa	20	ASTM D 732-08
3	Peel Strength, N/mm	12	ASTM D-903-08

DOR:29-09-2015

DOC:09-10-2015


AUTHORISED SIGNATORY
EMPLOYEE CODE : ()

**TEST REPORT****Report No. : GR:HL:6480013969****DATE : 20/07/2015****ALUDECOR LAMINATION PVT LTD..**

SUITE NO- 52 FIFTH FLOOR, 1RN MUKHERJEE ROAD

KOLKATA-70001

INDIA

CONTACT PERSON : MR. SURESH GHORAWAT**THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS****SAMPLE DESCRIPTION** ZINC COMPOSITE PANEL**COUNTRY OF ORIGIN** INDIA**SAMPLE RECD ON** 12/06/2015**TESTING PERIOD : 18/06/2015 - 18/07/2015****TEST(S) REQUESTED** COEFFICIENT OF LINER THERMAL EXPANSION TEST**CLTE (COEFFICIENT OF LINEAR THERMAL EXPANSION) TEST :****Test Equipment :**

Name	Brand	Model
Thermomechanical Analyzer (TMA)	TA	Q-400

Test Method : Ref. 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 Condition : Test temperature range : Ramp 10°C/min from -30°C to 30°C
Purge gas : Nitrogen (N₂), Purity 99.999%, Flow rate 50ml/min.
Measurement Direction : in length

TEST REPORT

Report No. : GR:HL:6480013969

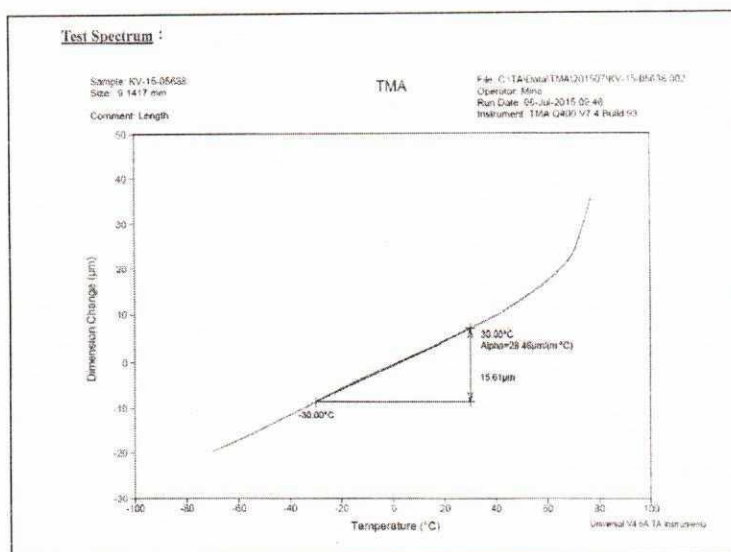
DATE : 20/07/2015



Test Results

Test Item	Test Result
Coefficient of linear thermal expansion (1/°C)	-30°C~30°C : 28.46×10^{-6}

Test Spectrum :



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Measurement Direction : in length

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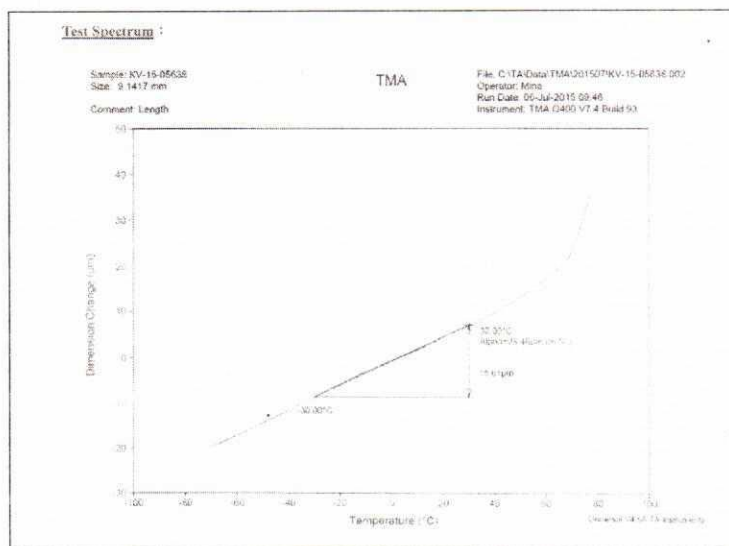
DATE : 20/07/2015



Test Results

Test Item	Test Result
Coefficient of linear thermal expansion (1/°C)	-30°C~30°C : 28.46×10^{-6}

Test Spectrum



Note

: Test performed as per the conditions given by the client.
Above test is subcontracted to SGS approved lab.

***** End of Report*****

Per Pro SGS India Private Ltd

Authorized Signatory

Lalit Raheja
(Sr Executive)

Email your Test Report Related Enquiries at Feedback.HLT@sgs.com



TEST REPORT

Report No. : GR:HL:6480013964

DATE : 20/07/2015



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SAMPLE DESCRIPTION ZINC COMPOSITE PANEL

COUNTRY OF ORIGIN INDIA

SAMPLE RECD ON 12/06/2015

TESTING PERIOD : 18/06/2015 - 19/07/2015

TEST(S) REQUESTED DENSITY TEST

DENSITY TEST

Test method : ASTM D 792 : 2013

Test condition : Preconditioned at $23 \pm 2^{\circ}\text{C}$ & $50 \pm 10\%$ RH for 40 hrs.

Observation : Density : 1.936 g/cm^3

Note : Test performed as per the conditions given by client.
Above test is subcontracted to **SGS** Approved lab.

***** End of Report*****

Per Pro SGS India Private Ltd

Authorized Signatory

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Report No. : GR:HL:6480013965**DATE : 20/07/2015**

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TESTING PERIOD : 18/06/2015 - 18/07/2015

TEST(S) REQUESTED TENSILE STRENGTH TEST



TENSILE STRENGTH TEST:

Test method : ASTM D 638 : 2014

Test condition : Preconditioning at 23±2°C & 50±5% Rh for 40hrs.

Type of machine used : CRE
Test speed : 5 mm/min.

Observation : Tensile strength : 517 kgf/cm²

Note : Test performed as per the conditions given by the client.
Above test is subcontracted to **SGS** Approved lab.

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TEST(S) REQUESTED FLEXURAL STRENGTH TEST

FLEXURAL STRENGTH TEST :

Test method : ASTM D 790 : 2010

Test condition : Pre-conditioned at $23 \pm 2^{\circ}\text{C}$ & $50 \pm 10\%$ RH for 40hrs.

Type of machine used : CRE
Speed : 1.73 mm/min.

Observation : Flexural strength : 1525 kgf/cm^2

Note : Test performed as per the conditions given by the client.
Above test is subcontracted to **SGS** Approved lab.

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TEST REPORT

Report No. : GR:HL:6480013967

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SAMPLE RECD ON 12/06/2015

TESTING PERIOD : 18/06/2015 - 18/07/2015

TEST(S) REQUESTED FLEXURAL MODULUS TEST



FLEXURAL MODULUS TEST :

Test method : ASTM D 790 : 2010

Test condition : Pre-conditioned at $23 \pm 2^{\circ}\text{C}$ & $50 \pm 10\%$ RH for 40hrs.

Type of machine used : CRE
Speed : 1.73 mm/min.

Observation : Flexural modulus : 184305 kgf/cm^2

Note : Test performed as per the conditions given by the client.
Above test is subcontracted to **SGS** Approved lab.

***** End of Report *****

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TEST REPORT

Report No. : GR:HL:6480013968

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COUNTRY OF ORIGIN INDIA

SAMPLE RECD ON 12/06/2015

TESTING PERIOD : 18/06/2015 - 18/07/2015

TEST(S) REQUESTED HEAT DEFLECTION TEMPERATURE TEST



HEAT DEFLECTION TEMPERATURE TEST :

Test method : ASTM D 648:2007

Test condition : Test conducted at $23 \pm 2^{\circ}\text{C}$ & $50 \pm 10\%$ RH for 40 hrs.

Stress : 1.82 Mpa

Heating rate : 120°C/hr.

Observation : HDT : $>240^{\circ}\text{C}$

Note : Test performed as per the conditions given by the client.
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TEST(S) REQUESTED FLEXURAL MODULUS TEST



FLEXURAL MODULUS TEST :

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Type of machine used : CRE
Speed : 1.73 mm/min.

Observation : Flexural modulus : 184305 kgf/cm²

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