



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 : C1/0000238988

| | | |
|---|------------------|------------------|
| Issued To : | Date | : 14-12-2020 |
| Client Code : (NDLS01M1925) | Job No | : 2012-1-111-753 |
| MERINO INDUSTRIES LTD. | Booking No | : RG2021/1/7591 |
| 70, KLI COMPLEX, 2ND FLOOR, MOTI NAGAR | Booking Date | : 07-12-2020 |
| NEW DELHI | Customer Ref No. | : EMAIL |
| DELHI-110015 | Customer Ref Dt. | : 01-12-2020 |
| Kind Attn: MR. DEEPU THOMAS JOSEPH, DEPUTY MANAGER - MARKETING | | |

Sample Particulars:

One sample described as One Type of Decorative Laminate Product, marked as "AB+", Declared as: Sample Dispatched, Address: Merino Panel Products Ltd. 44 km Stone, Delhi Rohtak Road, Rohad, Dist- Jhajjar-Haryana-124501, India was received.

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

| | |
|-------------------------|---|
| Product Details- | Decorative Laminate Product, marked as "AB+" |
| Test- | Determination of Anti Bacterial Activity and Efficacy of Decorative Laminate Product, marked as "AB+" |
| Protocol- | As per JIS-Z2801-2012 |
| Test Organisms- | Bacteria- <i>Escherichia coli</i> and <i>Staphylococcus aureus</i> |
| Sample Size | 50 mm x 50 mm each piece |

A) Antibacterial Activity and Efficacy against *Escherichia coli*

| S. No. | Untreated sample | Count per piece of control (in cfu/piece) | Conc. of Inoculum (Average count, in cfu/piece) |
|--------|--|---|---|
| 1 | Number of bacteria inoculated per piece at 0 hrs (U_0) | 5.4×10^4 | 5.6×10^4 |
| | | 5.8×10^4 | |
| | | 5.7×10^4 | |
| 2 | Number of bacteria inoculated per piece after 24 hrs incubation(U_t) | 5.7×10^5 | 6.0×10^5 |
| | | 6.2×10^5 | |
| | | 6.0×10^5 | |

AUTHORISED SIGNATORY
EMPLOYEE CODE: (5419)

GC-01(Rev-05)

Scanned copies/photocopies or any other copies should be authenticated by reference to the original report.

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SRI-C1 (Rev. 03)

See overleaf for terms & conditions



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| S. No. | Treated sample (Laminate product) | Count per piece of control (in cfu/piece) | Conc. of Inoculum (Average count in cfu) (At) | Antibacterial Activity after 24 hrs (U _t -A _t) |
|--------|---|---|---|---|
| 3 | Number of bacteria inoculated per piece at 24 hrs (A _t) | Less than 1 Less than 1 Less than 1 | Less than 1 | 5.78 |

B) Antibacterial Activity and Efficacy against *Staphylococcus aureus*

| S. No. | Untreated sample | Count per piece of control (in cfu/piece) | Conc. of Inoculum (Average count, in cfu/piece) |
|--------|--|---|---|
| 1 | Number of bacteria inoculated per piece at 0 hrs (U ₀) | 5.1 x 10 ⁴ 4.8 x 10 ⁴ 4.5 x 10 ⁴ | 4.8 x 10 ⁴ |
| 2 | Number of bacteria inoculated per piece after 24 hrs incubation(U _t) | 4.7 x 10 ⁵ 4.8 x 10 ⁵ 4.3 x 10 ⁵ | 4.6 x 10 ⁵ |

| S. No. | Treated sample (Laminate product) | Count per piece of control (in cfu/piece) | Conc. of Inoculum (Average count in cfu) (At) | Antibacterial Activity after 24 hrs (U _t -A _t) |
|--------|---|---|---|---|
| 3 | Number of bacteria inoculated per piece at 24 hrs (A _t) | Less than 1 Less than 1 Less than 1 | Less than 1 | 5.66 |

Interpretation: The antibacterial activity and efficacy of Decorative Laminate Product, marked as "AB+" was found 5.78 against *Escherichia coli* and 5.66 against *Staphylococcus aureus* which are above the value of 2.0 as per JIS-Z2801, hence the sample passes the test.

DOR: 07.12.2020

DOC: 14.12.2020

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