

## Tambour Poligag solar reflection Index - SRI

To whom it may concern,

Poligag is a water based acrylic white coating for roof sealing and whitening.

Based on ASTM E903-12 Standard test method for solar absorbance, reflectance, and transmittance of materials using integrating spheres, the solar reflectance of Poligag is **SR=0.8432**

Using a conservative estimate of emittance value of 0.85 for white paint, we have calculated **SRI>105** according to ASTM E1980-1

These values meet and far exceeds the requirements of LEED V4 for Heat Island Reduction for low sloped roofs

### Online solar reflectance index (SRI) calculator

Condition	Low-wind (0-2 m/s)	Medium-wind (2-6 m/s)	High-wind (6-10 m/s)
Black surface temperature	376.8 K	355.6 K	334.2 K
White surface temperature	322.4 K	317.8 K	313.9 K
Sample surface temperature	319.3 K	315.7 K	312.9 K
<b>Solar reflectance index (SRI)</b>	<b>105.7</b>	<b>105.4</b>	<b>105.3</b>

Solar reflectance:

Solar absorbance:

Emittance:

Temperature unit:

Calculate SRI

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### How to use the SRI calculator?

Simply input your material's solar reflectance and emittance to the SRI calculator above and get its SRI instantly.

- Solar reflectance: the range of solar reflectance is 0 – 1, with 0 for perfect black material and 1 for perfect white. If you know your material's solar reflectance in percentage, simply convert it to decimal (e.g. 56.7% = 0.567).
- Emittance: it is often called emissivity. **The emittance of most materials is between 0.85 and 0.95.** If you are not sure, you can simply use the default value 0.90.

The calculator is based on ASTM E1980-11.

Calculator source: <https://www.otm.sg/sri-calculator>

Ilan Yahav

Head of sustainability and green building

Tambour

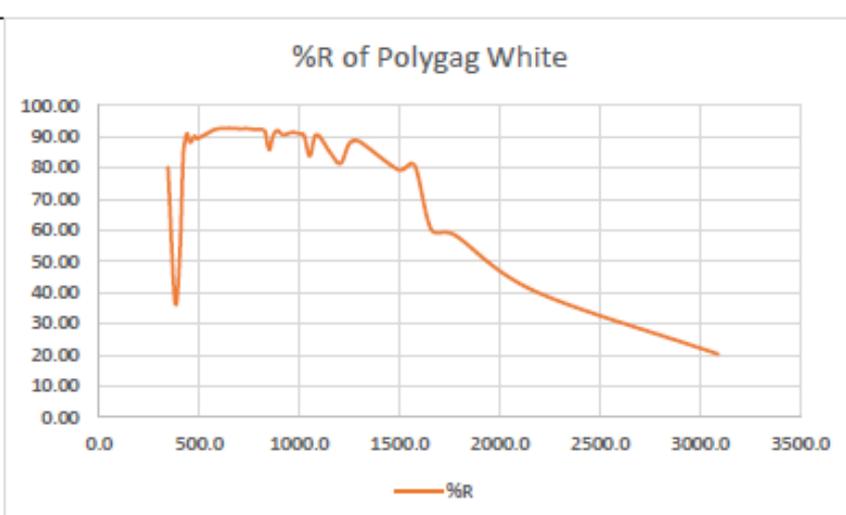
# Paint Solar Reflectance Test Report

Report number: Tambour Internal Report

Client:	Company name N/A
Laboratory:	Tambour R&D Laboratory P.O.B.2238 Akko 24121, ISRAEL Tel: (+972) 59853793 Email: <a href="mailto:michaelt@tambour.co.il">michaelt@tambour.co.il</a> Web: <a href="http://www.tambourpaints.com">www.tambourpaints.com</a>
Project description:	White Polygag- פול'גג
Date of report:	11.10.2023

## Test method description

Methods:	<input type="checkbox"/> ASTM E903-12 Standard test method for solar absorbance, reflectance, and transmittance of materials using integrating spheres
Instruments	<input type="checkbox"/> Perkin Elmer Lambda 900 UV/VIS/ NIR spectrophotometer . Total reflectance measurements were obtained in the solar spectrum from 300nm to 3100 nm
Calculation method	<input type="checkbox"/> The spectral data were integrated against Air Mass 1.5 global spectrum utilizing 50 weighted ordinates.
Note	N/A

Sample ID	White Polygag- פול'גג
Client's reference	1 mm thickness Film of Polygag
Date of delivery	N/A
Date of test	8.10.2023
Test results	Solar reflectance = 84,32%
Curve	 <p style="text-align: center;">%R of Polygag White</p>
Picture	N/A

**Reflectance values of weighted ordinates**

nm	%R		nm	%R
3089.8	20.3		713.2	92.5
2178.2	40.4		696.7	92.6
1774.8	58.5		680.6	92.8
1659.0	60.2		665.3	92.7
1575.1	80.9		651.1	92.8
1496.1	79.4		637.0	92.7
1296.6	88.6		623.2	92.7
1250.2	87.9		609.5	92.7
1205.7	81.4		595.6	92.6
1156.8	84.7		581.7	92.4
1085.7	90.7		568.0	92.1
1052.3	83.8		555.0	91.6
1023.5	90.4		542.0	91.1
995.7	91.0		529.2	90.6
964.5	91.4		516.1	90.2
917.8	90.6		503.3	89.8
891.9	92.0		490.4	89.4
869.6	90.4		477.8	90.3
848.8	85.9		465.2	88.9
827.4	91.9		452.5	88.3
805.1	92.3		438.4	90.9
786.3	92.4		421.1	84.5
768.0	92.4		403.5	52.4
748.5	92.5		379.5	37.0
731.3	92.7		344.6	80.2

**Dr. Michael Tabachnik**  
**Tambour R&D technical Manager**  
**Paint Division**