

Material Solar Reflectance Index (SRI) Test Report

Report number: OTM2608066



Client: **FORSPEC PROTECTIVE COATINGS**

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Australia

Laboratory: **Optical & Thermal Testing Laboratory**

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View laboratory profile

The Optical & Thermal Testing Laboratory of OTM Solutions Pte Ltd is accredited to ISO/IEC 17025 under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme (SAC-SINGLAS, Certificate No: LA-2016-0610-G).

The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council.

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Note: this report supersedes the previous report OTM2608054 dated 21/08/2026, with the client name on page 1 amended.

Job description: Testing of solar reflectance index (SRI) of 1 sample.

The sample was delivered by the client and received by OTM on 17/08/2026 and was tested on 20/08/2026.

Approved signatory: Dr. Chen Fangzhi

Laboratory Manager (Tel: +65 9187 7666; Email: chen.fz@otm.sg)

Date of test: 20/08/2026

Date of report: 27/08/2026

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Test method description

<u>Methods</u>	• ASTM E903-20 Standard test method for solar absorptance, reflectance, and transmittance of materials using integrating spheres • ASTM C1371-15 Standard test method for determination of emittance of materials near room temperature using portable emissometers ○ With D&S Technical Note 11-2: Model AE1 emittance measurement using a port adaptor, Model AE-ADP • ASTM E1980-11 Standard practice for calculating solar reflectance index of horizontal and low-sloped opaque surfaces
<u>Instruments</u>	• PerkinElmer Lambda 950 UV/VIS/NIR spectrophotometer, with 150 mm integrating sphere • Devices and Services emissometer with scaling digital voltmeter, model AE1 RD1
<u>Environmental conditions</u>	• Temperature: 24 ± 2 °C • Relative humidity: $45 \pm 15\%$
<u>Calculation software and method</u>	• In-house software (SRI@OTM, V2.0.3) based on ASTM E1980 and E903 ○ Solar properties were calculated with the weighted ordinate method (Section 8.3 of ASTM E903) ○ The AM1.5 direct normal solar spectral irradiance distribution defined in ASTM E891 was used as the weighting spectrum ○ Surface temperatures were calculated by solving Eq. 1 of ASTM E1980 iteratively
<u>Estimated uncertainties</u>	• ± 0.007 ($\pm 0.7\%$) for solar reflectance and absorptance • ± 0.02 for emittance • ± 1.7 for solar reflectance index (SRI) • The uncertainties were estimated at a level of confidence of approximately 95%, with a coverage factor $k = 2$
<u>Notes</u>	N/A

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Disclaimer

- The test report shall not be reproduced except in full, without written approval of the laboratory.
- The sampling was not performed by the laboratory. The test results relate only to the sample received and tested.
- The sample description information was declared by the client and it may affect the validity of the results.
- The test report is issued subject to the “Testing Service Terms and Conditions” annexed to OTM official quotation and on request from OTM.

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<u>Sample ID</u>	2608080																				
<u>Sample description</u>	ACTFLEX ATC																				
<u>Dimension</u>	1 mm × 7.5 cm × 15 cm																				
<u>Test results</u>	Emittance = 0.90 Solar reflectance = 0.181 (18.1%) Solar absorptance = 0.819 (81.9%) <table><thead><tr><th>Condition</th><th>Low-wind (0 – 2 m/s)</th><th>Medium-wind (2 – 6 m/s)</th><th>High-wind (6 – 10 m/s)</th></tr></thead><tbody><tr><td>Black surface temperature, T_b, [K]</td><td>376.8</td><td>355.6</td><td>334.2</td></tr><tr><td>White surface temperature, T_w, [K]</td><td>322.4</td><td>317.8</td><td>313.9</td></tr><tr><td>Specimen surface temperature, T_s, [K]</td><td>368.4</td><td>349.4</td><td>330.7</td></tr><tr><td>Solar reflectance index, SRI, [-]</td><td>15.5</td><td>16.5</td><td>17.2</td></tr></tbody></table>	Condition	Low-wind (0 – 2 m/s)	Medium-wind (2 – 6 m/s)	High-wind (6 – 10 m/s)	Black surface temperature, T_b , [K]	376.8	355.6	334.2	White surface temperature, T_w , [K]	322.4	317.8	313.9	Specimen surface temperature, T_s , [K]	368.4	349.4	330.7	Solar reflectance index, SRI , [-]	15.5	16.5	17.2
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<u>Spectral curve</u>	Reflectance <table><caption>Spectral Curve Data (Estimated)</caption><thead><tr><th>Wavelength [nm]</th><th>Reflectance [-]</th></tr></thead><tbody><tr><td>300</td><td>0.05</td></tr><tr><td>400</td><td>0.25</td></tr><tr><td>500</td><td>0.22</td></tr><tr><td>1000</td><td>0.18</td></tr><tr><td>1500</td><td>0.15</td></tr><tr><td>2000</td><td>0.14</td></tr><tr><td>2500</td><td>0.12</td></tr></tbody></table>	Wavelength [nm]	Reflectance [-]	300	0.05	400	0.25	500	0.22	1000	0.18	1500	0.15	2000	0.14	2500	0.12				
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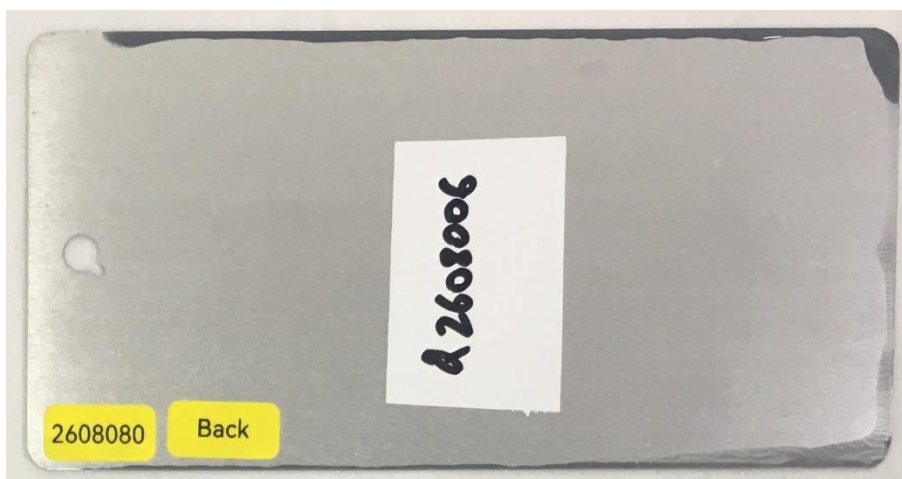
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Photos



Front side (the side tested)



Back side