



Spectral reflectivity measurement - Calculation of reflectivity in solar radiation.

The measurement of spectral reflectivity was carried out using the UV/VIS/NIR spectrophotometer from Jasco, model V670, in the range of 250-2500nm. The V670 spectrophotometer is equipped with an integrating sphere with a diameter of 150mm for measuring both diffuse and specular reflection. The specifications of the spectrophotometer comply with the requirements of the ASTM E903-12 standard: Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres. The reference material used was Spectralon from Labsphere.

From the data of the spectral reflectivity measurement, the calculation of solar reflectivity was carried out, based on the ASTM G173-03 standard: Standard Tables for Reference Solar Spectral Irradiances: Direct Normal and Hemispherical on 37° Tilted Surface.

The values of solar reflectivity (TSR) and in the individual segments of the solar spectrum (VIS, NIR) are presented in Table 1.

Table 1. Summary table of results

Sample	Reflectivity (ASTM G173)		
	TSR (250 - 2500 nm)	NIR (700 - 2200 nm)	Vis (380 - 780 nm)
TECHNOPROOF THERMO	0,90	0,92	0,95

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