

Standard Merino versus Energy Star Merino

The reported information below is done in accordance with ASTM E 1980-01. The comparative data is based upon an ambient air temperature of 37° C. The highlighted numbers represent the Solar Reflectance Index and product surface temperatures.

ASTM E1980-01 Solar Reflectance Index Calculator for Low-Slope Roofing			
Product Colour	STANDARD MERINO		
Thermal emittance=	0.850		
TSR=	0.525		
Solar Absorbance=	0.475		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.475	0.466	0.459
SRI=	59.06	60.18	61.17
Standard solar conditions Solar Flux=1000 W/m ² Ambient Air Temp=310K (37C) Ambient Sky Temp=300K (27C) No conductive heat transfer			
Low Slope Roofing Temperatures for above standard solar conditions			
Surface Temperature (K)=	344	333	322
Surface Temperature (C)=	71	60	49
Surface Temperature (F)=	160	139	120

ASTM E1980-01 Solar Reflectance Index Calculator for Low-Slope Roofing			
Product Colour	ENERGY STAR MERINO		
Thermal emittance=	0.900		
TSR=	0.683		
Solar Absorbance=	0.317		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.296	0.294	0.293
SRI=	83.00	83.23	83.43
Standard solar conditions Solar Flux=1000 W/m ² Ambient Air Temp=310K (37C) Ambient Sky Temp=300K (27C) No conductive heat transfer			
Low Slope Roofing Temperatures for above standard solar conditions			
Surface Temperature (K)=	331	324	317
Surface Temperature (C)=	58	51	44
Surface Temperature (F)=	137	124	111