

Standard Quarry versus Energy Star Quarry

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 QUARRY		
Thermal emittance=	0.850		
TSR=	0.402		
Solar Absorbance=	0.598		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.604	0.593	0.584
SRI=	42.09	43.48	44.72
Standard solar conditions Solar Flux=1000 W/m2 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)=	354	339	325
Surface Temperature (C)=	81	66	52
Surface Temperature (F)=	177	151	126

ASTM E1980-01 Solar Reflectance Index Calculator for Low-Slope Roofing			
Product Colour	ENERGY STAR QUARRY		
Thermal emittance=	0.900		
TSR=	0.598		
Solar Absorbance=	0.402		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.382	0.380	0.378
SRI=	71.35	71.64	71.90
Standard solar conditions Solar Flux=1000 W/m2 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)=	338	328	319
Surface Temperature (C)=	65	55	46
Surface Temperature (F)=	148	132	116