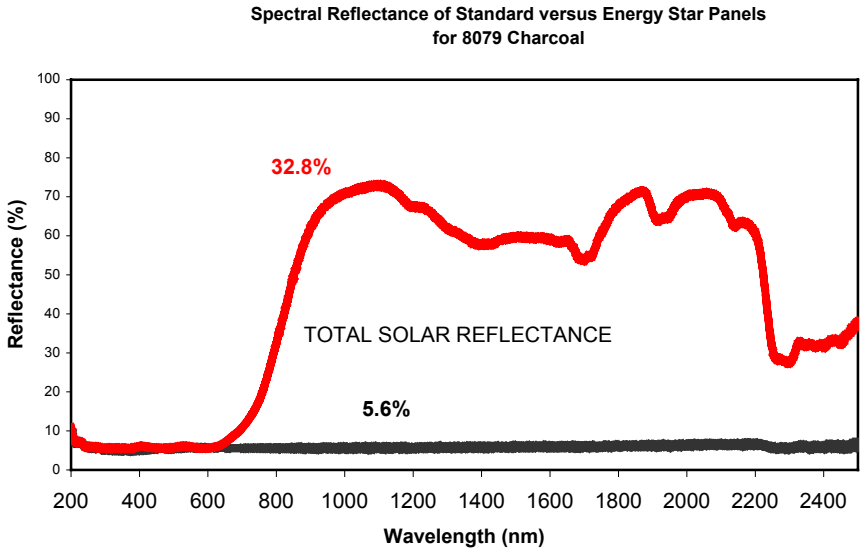
What do T.S.R.% Figures Represent ?

T.S.R. figures are values that express in numerical terms the *Total Solar Reflectance* of a given surface and are usually expressed as T.S.R.%.

The total solar reflectance figures are obtained through laboratory testing of coating films to such standards as ASTM E-903 or ASTM C-1549.

Testing to ASTM E-903 or ASTM C-1549 provides numbers as expressed as T.S.R.% that are the ratio of total solar energy which is reflected outward by the coating system to the amount of total solar energy falling on the coating system.

The way T.S.R.% is commercially understood, is that the difference in % of two different T.S.R. figures is broadly applicable to what happens in the real world when the surfaces are exposed to Solar radiation from the Sun. The actual surface temperature of a coating can vary greatly when influenced by such things as cloud cover and wind. However, T.S.R.% values have proven to offer a relatively consistent way of calculating the difference in surface temperature that could be expected between two products with different T.S.R. numbers.



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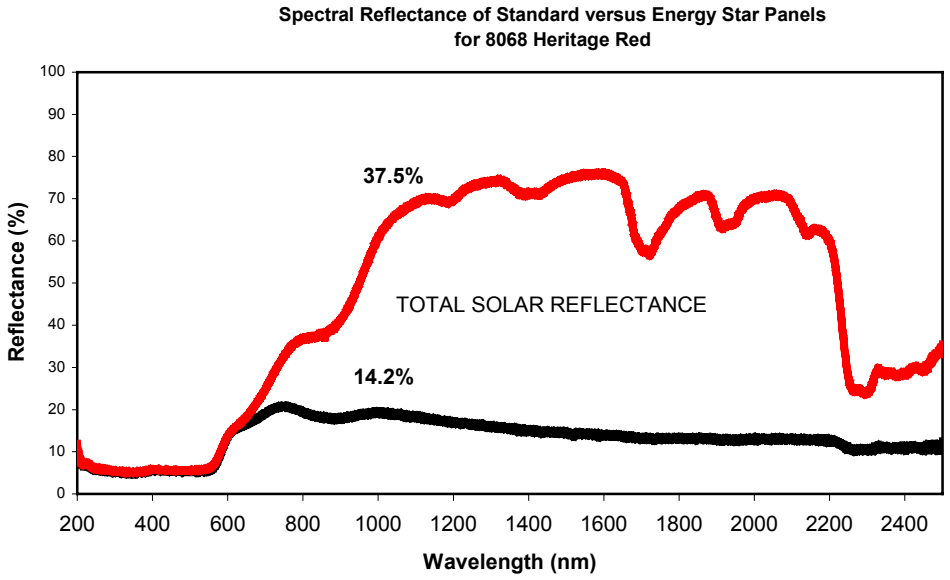
Example:

If a coating with a T.S.R.% of 14.2 developed a temperature of 65 degrees Celsius on a 28 degree day. Then we wanted to know the surface temperature should that coating be replaced with a coating that had a higher T.S.R% figure of 37.5. The difference in surface temperature would be the difference in % between the two T.S.R. figures subtracted as a percent from the initial temperature.

In the case of this example, the T.S.R. difference is 23.3%, therefore, the surface temperature would be the original 65 degrees C less 23.3% which results in a temperature reduction of 15.15 deg C and a final surface temperature of 49.85 degrees Celsius.

It should be noted that T.S.R. figures do not take into account any other insulating properties of a coating film such as varying rates of thermal transmission properties between different coatings and as a result the actual heat that is convected into the building can vary.



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