RMCAO The Power of Concrete

SUSTAINABILITY AND CONCRETE
– what you need to know

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LIGHT REFLECTANCE

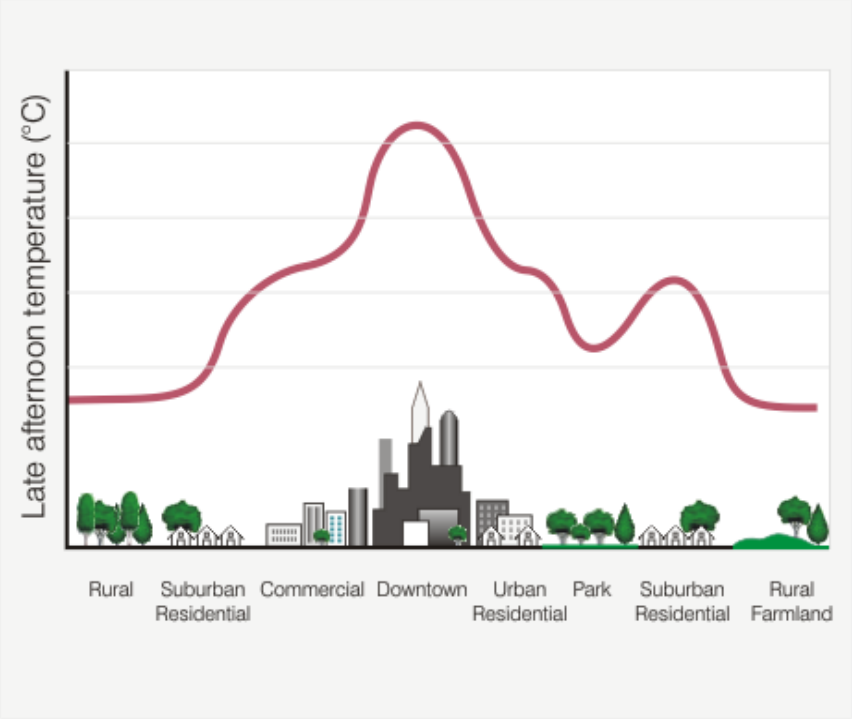
As more and more projects seek some form of LEED® certification, the subject of solar reflectance or **albedo** has become an important topic for ready mixed concrete producers to understand. Because of concrete's light color, it has become the pavement of choice for designers looking to reduce the urban heat island effect caused by impervious dark surfaces such as asphalt. The Solar Reflectance Index (SRI) is a measure of a material's ability to reject solar heat. As an example, new asphalt has an SRI of around 0, whereas new concrete could be anywhere from 38 to 52.

According to the LEED® Green Building Rating System's Sustainable Sites Credit 7.1: Heat Island Effect: Non-Roof, one of the ways to earn this point is if 50% of the site's hardscape is paved with a material whose SRI is 29 or above. In some cases, pervious concrete can also meet the SRI requirement, but since mixes vary, testing and corroboration is required. Ready mixed concrete producers are being called upon by the design teams of LEED® projects to document the SRI of a project's mix design, but producers are not often aware of how to go about obtaining this information.

One option is to contact The CTL Group, Skokie, IL, which can measure solar reflectance according to ASTM C 1549, Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer, and can calculate the solar reflectance index according to ASTM E 1980, Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

The tests for determining the SRI of a particular mix are neither complicated nor expensive. This information can, however, set a particular producer apart from other producers vying for the project.

(Courtesy NRMCA)



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