



# Powder Coat Cure Tip

## Gloss Level Measurement

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**All of our product specifications listed on our website are generated from the 60° gloss meter. (0% - 100%) 0% having no gloss and 100% having the highest gloss)**

### **Specular Gloss – ASTM D523**

**ASTM D523** covers the measurement of the specular gloss of nonmetallic specimens for gloss meter geometries of 60°, 20°, and 85°.

The geometry of angles and apertures is chosen so that these procedures may be used as follows:

The 60° geometry is used for inter-comparing most specimens and for determining when the 20° geometry may be more applicable. The 20° geometry is advantageous for comparing specimens having a 60 gloss values higher than 70. The 85° geometry is used for comparing specimens for sheen or near-grazing shininess. It is most frequently applied when specimens have 60° gloss values lower than 10.

Gloss is associated with the capacity of a surface to reflect more light in some directions than in others. The directions associated with mirror (or specular) reflection normally have the highest reflectance. Measurements by this test method correlate with visual observations of surface shininess made at roughly the corresponding angles.

Measured gloss ratings by ASTM D523 are obtained by comparing the specular reflectance from the specimen to that from a black glass standard. Since specular reflectance depends also on the surface refractive index of the specimen, the measured gloss ratings change as the surface refractive index changes. In obtaining the visual gloss ratings, however, it is customary to compare the specular refractive indices.

Since the instrumental ratings are affected more than the visual ratings by changes in surface refractive index, non-agreement between visual and instrumental gloss ratings can occur when high gloss specimen surfaces differing in refractive index are compared.

Reference: ASTM D523 Standard Test Method for Specular Gloss