

EXPLANATION OF SPECTROPHOTOMETRIC DATA

The spectrophotometer is coupled with a computer, which allows colors to be measured under controlled conditions, and compared to an established standard, resulting in a numerical expression defining the relationship of the batch to the standard. While there is a variety of color difference formulations in use, the CIELAB is most commonly used in the plastics and polymer industry because it offers relatively good visual correlation over a wide range of color space.

SPECTROPHOTOMETER CONFIGURATION FOR COA

- Type:** Datacolor
Illuminate: D65 Daylight
Observer: 10 degree, large area view, specular included

EXPLANATION OF SPECTROPHOTOMETRIC VALUES

- DL*** Lightness/Darkness Difference (Delta L*)
The shade of gray (black/white)
+ = Lighter
- = Darker
- Da*** Red/Green Color Difference (Delta a*)
+ = Hue is redder (or less green than)
- = Hue is greener (or less red than)
- Db*** Yellow/Blue Color Difference (Delta b*)
+ = Hue is yellower (or less blue than)
- = Hue is bluer (or less yellow than)
- DC*** Difference Attributed to Chromaticity (Delta C*)
+ = More saturated than (more color intensity)
- = Less saturated than (less color intensity)
- DH*** Difference Due to Hue Only (Delta H*)
- DE*** Total Color Difference (Delta E*)

DE is a mathematical calculation utilizing the DL*, Da* and Db*, and therefore, used alone this number can be misleading as to the true color of a material. We recommend that our customers visually determine if the color of the product is acceptable.



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