

## Holbein Artists' Colored Pencils Lightfast Ratings

### Methodology:

- (1) The first step: Prepare Test Specimens for all color lines as per the ASTM D6901 directions.
- (2) The second step: Place each Test Specimen into a Weather-o-Meter to be exposed to xenon arc as per the ASTM D6901 directions.
- (3) The third step: Use a Spectro Photo Meter to measure and quantify the changes in the Test Specimens after it had been exposed to xenon arc in the Weather-o-Meter.
- (4) The fourth Step: Quantify the results after using the Spectro photo meter and complete a cross reference using the ASTM D6901 standard to the Holbein Lightfast Rating System. The numbers quantified are indicated using an  $\Delta E^*ab$  symbol. The smaller the  $\Delta E^*ab$  numbers, the stronger the lightfast rating.

### Holbein Lightfast ratings ASTM 6901 Lightfast ratings (LF)

***	Permanent Colors	LF I: $\Delta E^*ab < 4$
***	Permanent Colors	LF II: $4 < \Delta E^*ab < 8$
**	Moderately Durable Colors	LF III: $8 < \Delta E^*ab < 16$
*	Fugitive Colors	LF IV: $16 < \Delta E^*ab < 24$
	No Star	LF V: $24 < \Delta E^*ab$



Holbein Artists' Colored Pencils are manufactured with 100% PEFC (Forest Protection Certified) Wood.

[www.pefc.org](http://www.pefc.org)