

### DETERMINATION OF LIGHTFASTNESS (ACCORDING TO ISO 12040)

#### 2.3.2.1

The determination of the lightfastness is realised with printing products or test prints. In case of test prints, **Prüfbau proof prints** are prepared on art-coated paper with an ink layer thickness of 1.4 - 1.6 g/m<sup>2</sup>.

In order to determine the lightfastness of a print, the samples - together with the so-called Blue Wool Scale - are exposed in an ATLAS „Suntester CPS“ or similar appropriate equipment to standard xenon light. For subsequent comparison, parts of the prints and the wool scale are covered with a metallic plate holder. The samples are exposed as long as a “distinct” visual change in shade (or contrast) between the exposed and unexposed part of the print becomes visible. “Distinct” means here Step 3 on the Grey Scale according to ISO 105-A02. The lightfastness of the print then corresponds to the grade on the Blue Wool Scale, which changed to the same extent.

The lightfastness is indicated by the grades on the Blue Wool Scale:

BWS 1 = poor	BWS 5 = good
BWS 2 = low	BWS 6 = very good
BWS 3 = average	BWS 7 = extremely good
BWS 4 = rather good	BWS 8 = excellent

The lightfastness values which we guarantee for are indicated on the labels on our tins and are established by the assessment of proof prints.

In order to assess several samples with varying light fastnesses together in a single test, it is possible to cover the samples subsequently in appropriate time intervals from left to right. By doing so, for example a print sample with a low light fastness can be assessed, even though the test had to be extended because a sample with a much higher light fastness also was present.

The following picture shows a typical makeup of a lightfastness test after exposure showing 3 different print samples and the complete Blue Wool Scale:



