VERSAL BLACK B

C.I. Pigment Black 31

Perylene

Pigment is characterized by high level of tinting strength and transparency. It provides shades of black or intense very dark olive hues in masstone. Pigment exhibits very good resistance to certain chemicals as well as high level of fastness to light and weathering. Pigment also offers a benefit of functional colorant because of thermochromic properties as well as satisfies certain spectral requirements in the IR region. For that reason pigment can be used in special printing and other application areas like watercolors for artists, fluorescent makers or IR-reflecting coatings.

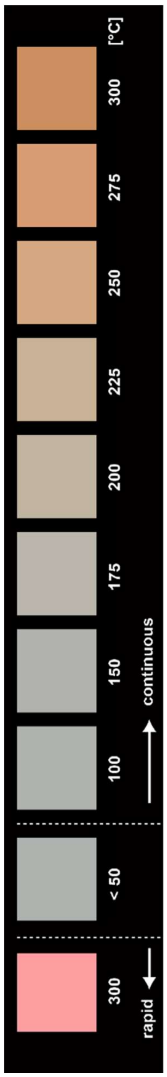

Figure A. Colour change of PBk31 (0.05 %) in stoving enamel

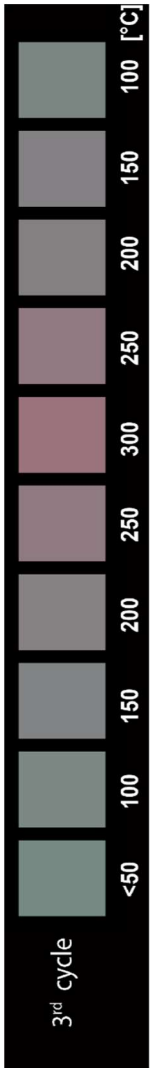

Figure B. Colour change of PBk31 (1 %) in silicone based

Functional thermochromic properties of transparent coatings containing PBk31 are illustrated in Figures A and B as captured on neutral grey aluminium substrates. In stoving enamel the colour change is irreversible, starting at neutral greenish tint and finishing at more saturated orange tint when heated continuously. The tint changes to bright pink when heated rapidly. This kind of sensor can be utilised as a simple visual detector when it is necessary to check if the temperature of a part exceeded given temperature (e.g. 200 °C). The coating is suitable for inspection both immediately and later in time (after the part cools down). In silicone based coating, the thermochromic change is partly reversible, thus this coating can be utilised for immediate monitoring of parts where the limit is 250 °C or 300 °C. The tint changes from neutral greenish to intermediate saturated magenta colour.

Before practical application, functionality and thermochromic properties of PBk31 in particular coating have to be tested in respect to required stability, repeatability and other properties.

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