

Technical Information

DF14

Performance Pigments and Colors

CerDeChromAdvanz – Ceramic Colour Management System

Seven-Colour Printing Unleaded Onglaze Colours for the Decoration of Porcelain, Bone China, Vitreous China, and Earthenware

Firing Range 820 to 900 °C

CerDeChromAdvanz gives us the opportunity of doing the first seven-colour printing process in the ceramic industry. The seven-colour printing process enables us to reproduce designs favourably compared to the original design in an economical way.

Printing Parameters

Following printing parameters are recommended:

Screen textile: polyester 140/31 (355 mesh/inch)

Screening: 56 lines per cm / 140 lines per inch (elliptic)

Screen angle: Magenta, Green, Blue: 75 °
Cyan, Red: 15 °
Yellow, Black: 45 °

Squeegee hardness: 75 - 80 °shore

The indicated values for the screen angle are only recommendations according to our experience. These values should, however, be tested under individual processing condition before use.

Powder colours should be stored in a dry place. Opened containers should be closed carefully. To ensure that the colours have not absorbed any humidity, we recommend drying the colour powder at approx. 130 °C prior to mixing.

Table 1: CerDeChromAdvanz onglaze products for seven colour printing

Printing sequence	Colour Shade	Product No.	Pasting Ratio	
1 st print	Yellow	13 1655*	100:70	Colour : medium 80 810 / 80 820 (24:46)
2 nd print	Cyan	12 1655	100:90	Colour : medium 80 810
3 rd print	Magenta	77 1642	100:75	Colour : medium 80 810 / 80 3035 (55:20)
4 th print	Flux	10 1652	25:100	Flux : medium 80 820
5 th print	Green	11 1653*	100:80	Colour : medium 80 810
6 th print	Blue	12 1654	100:70	Colour : medium 80 810
7 th print	Red	17 1657*	100:70	Colour : medium 80 810 / 80 3035 (46:24)
8 th print	Black	14 1650	100:70	Colour : medium 80 810
9 th print	Coating flux	10 1652	100:120	Flux : medium 80 820

* cadmium containing colours

Firing Conditions

Normal firing: 820 – 850 °C
Fast firing: 860 – 900 °C.

The colours have been tested according to EN 1388.1 and 1388.2 (4 % acetic acid at 22 °C, 24 h). Heavy metal release is far below the official restrictions.

Heavy Metal Content and Heavy Metal Release

The cadmium-free colours are controlled lead- and cadmium-free with the following upper limits: 100 ppm PbO and 600 ppm CdO.
The cadmium-containing colours are controlled lead-free (PbO content < 100 ppm).

The colours fulfil the limits of EN 1388 1-2 as well as the Californian prop. 65 and the FDA.

Our safety data sheets, which are available for every product, provide you with useful advice for working with our products.

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