

Technical Information

DF35

Performance Pigments and Colors

Orchid – Resistant Onglaze Purple Colours for Porcelain, Bone China, and Earthenware

In this Technical Information Ferro presents the Orchid onglaze purple colours. These colours have excellent processing characteristics in all conventional decorating methods like screen printing (direct and indirect), lining and banding, spraying as well as hand painting. The here listed colours show brilliant, reddish colour shades with high constancy in the recommended firing range as well as a good resistance.

Screen Printing

For the colours of the Orchid series we recommend polyester screens with 120-140 threads/cm (300-355 mesh/inch) or stainless steel VA 140 – VA 160.

Spraying

Colour suspensions for spraying application can be produced with oil-based media as well as with water-soluble media.

Machine Lining and Banding

Colour suspensions applied with brushes, steel- or neoprene-rollers are generally based on water-soluble media.

For all standard methods, Ferro offers suitable media and covercoats. Further detailed technical information can be found in our **CerDePrint Media Guide**.

The 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.

Miscibility

All colours are universally intermixable. In any case, we recommend to test mixtures under the specific processing conditions prior to use. The Orchid colours are also miscible with the colours of the 64 Series.

Creating pastel shades should be done with White 19 870. To lighten and overprint colours, we recommend our mixing flux 10 140.

Firing Conditions

For **bone china** and **earthenware** under normal firing conditions the firing temperature should be between 750 and 780 °C. On bone china, the firing temperature may be as high as 900 °C, depending on firing cycle and glaze.

Porcelain should be fired at 780 to 850 °C under normal firing conditions and at 850 to 1050 °C in fast firing.

Resistance

The resistance of fired colour layers to acid and alkali attacks is influenced by the colour deposit, the firing conditions, and the glaze.

In laboratory tests and under industrial conditions on various earthenware, bone china and porcelain bodies, the colours of the **Orchid** series show only a very slight alkali attack (test with 0.5 % Calgonite solution, 77 °C, 16 h).

Heavy Metal Release

The release of heavy metals is primarily influenced by the glaze composition, the firing conditions (firing cycle and kiln atmosphere), and the colour deposit. It is therefore necessary that the end user tests the heavy metal release according to the relevant standard procedures for all products manufactured under his technical production conditions.

If the layers are too thin, the firing temperature too high, or the firing cycle at peak temperature too long, heavy metal release might be higher.

All **Orchid** colours fulfil the limits of EN 1388 1-2. According to our experiences, mixtures have the same resistance as the basic colours.

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

While every attempt has been made to reproduce colours exactly, the samples printed here may differ slightly from the finished ceramic products.

Fig. 1: Colour samples of the Orchid series



77 465 Intensive Purple



77 466 Dark Purple



77 467 Medium Purple



77 468 Carmine Rose



77 477 Dark Maroon



77 478 Maroon



77 479 Purple



77 480 Carmine



77 481 Rose Purple

Table 1: The Orchid colours

| Reference | Colour Shade | Pantone® Code ¹ | ABC Status ² |
|-----------|------------------|----------------------------|-------------------------|
| 77 465 | Intensive Purple | 216 c | B |
| 77 466 | Dark Purple | 194 c | A |
| 77 467 | Medium Purple | 219 c | A |
| 77 468 | Carmine Rose | 1905 c | A |
| 77 477 | Dark Maroon | 215 c | B |
| 77 478 | Maroon | 220 c | A |
| 77 479 | Purple | 219 c | A |
| 77 480 | Carmine | 1905 c | A |
| 77 481 | Rose Purple | 211 c | A |

¹ The above mentioned **Pantone®** code is only a guideline for the colour shade.

Pantone® is a registered trade mark of Pantone Inc.

² A: Product is normally available from stock (safety stock).

B: Product may be on stock, but a new batch will only be produced when a customer order arrives (no safety stock).

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