

Technical information

Leadfree onglaze colours of the A.03 series

1 General

Series A.03 onglaze colours are used for porcelain, Bone China, earthen ware, Vitreous China and enamel.

	Firing range
Procelain	820-900°C
Bone China	800-900°C
Earthen ware	780-840°C
Vitreous China	820-900°C
Enamel	800-830°C

The colours show a high colour intensity, a homogenous colour surface and a high level of gloss after firing. There is also a good mechanic and chemical resistance of fired decorations.

Characteristic of quality: Colour deviation ΔE max 1,6 (Hunter)

Usually we deliver our colours as powder. Standard unit: 4 kg

If the customer wishes he can get the colours also ready for spraying, screen printing, tampon printing or in thermoplastic form.

2 Characteristics of the colour powder

Particle size distribution is for 95% lower than 20µm.

Heavy metal content

The colours of the A.03 series are controlled **leadfree** and also controlled **Cd-free**, i.e. their lead-content is under 600ppm and their cadmium-content is under 600 ppm .
Exceptions are of course the colours marked with **Cd-**.

Miscibility

The colours are all miscible within the series.

There are only the following exceptions:

Cadmium-free colours and those containing cadmium (**Cd-**) are only to a certain extent miscible with each other.

Purple-containing colours are miscible with each other, but the miscibility with purple-free colours has to be tested individually.

3 Characteristics of the fired A.03 colours

Heavy metal release / resistance according to DIN EN 1388-1-2

All A.03 colours show a heavy metal release according to the standards of FDA, EN 1388-1-2 and the Californian Proposition 65.

Because of the various factors that influence the production and the processing (firing) of decals individual tests are necessary.

Acid resistance

The fired decoration is exposed to a vinegar suspension for 24 hours. After that the stability of gloss and colour are tested.

The colours are to a great extent stable concerning gloss and colour intensity, but depending on layer thickness, firing conditions and the glaze.

Dishwasher durability

The colours/decorations show a good durability in industrial dishwashers.

As there is a variety of test conditions (dishwasher types and washing-up liquids) individual test results have always to be considered.

4 Printing conditions

From the enclosed product list you can see the printing conditions of the existing colour swatches.

Generally all oils and lacquers currently obtainable can be used in combination with the A.03 colours.

As **flux for overprinting** we recommend:

028 (porcelain)

032 (Bone China)

As **flux for mixing** with the colours we recommend:

016 (porcelain, Bone China)

Concerning the colour layer a maximum thickness of 25 µm has to be observed before firing.

5 Note

The information of this publication is based on our current knowledge and experience. In view of the variety of factors that may influence the processing and application of our products, this information does not release the processors from the responsibility of carrying out their own tests and experiments. Neither does it imply any legally binding assurance of certain properties or of suitability for a special purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.