

Fast-firing Inglaze Colors

I.100 series **leadfree**

General

Leadfree series I.100 inglaze colors have been created especially for fast firing.

Firing range:

1000 °C – 1260 °C Porcelain, Bone China / Fine China

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

The maximum color value deviation ΔE of 1,6 (Hunter) is a characteristic of high quality.

Usually we deliver our colors as powder. The standard unit is 5 kg.

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

Characteristics of the color powders

Particle size diameter is for 95% lower than 25 μm .

Heavy metal content

The Pb- and Cd- content of the colors is under 100 ppm.
Exceptions are the colors marked with **Cd-**.

Miscibility

I.100 colors are all miscible within the series.

There are only the following exceptions:

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

The miscibility of the purple-containing colors has to be tested individually.

Characteristics of the fired I.100 colors / Resistance

The characteristics of the fired colors are essentially dependent on the glaze in which they are burnt in. Therefore the information given in this technical data sheet can only be seen as recommendation. The tests for resistance have to be carried out in dependence on the glaze itself.

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

Because of the various factors that influence the production of the decals, the glaze and the firing process, individual tests are necessary.

Resistance to acids

The fired decoration is exposed to a vinegar suspension for 24 hours. After that the stability of the decal's gloss and color are tested. I.100 colors are for the most part stable concerning gloss and color intensity. This, however, depends on layer thickness, firing conditions and glaze.

Dishwasher durability

The colors / decorations show a good durability in industrial dishwashers. As there is a variety of test conditions (dishwasher types and washing-up liquids as well as firing conditions and glaze) individual test results have always to be considered.

Printing conditions

The printing conditions given here are only suggestions. The exact ratio has to be determined by the printer himself depending on the medium and the decoration.

The present decals are produced under the following printing conditions:

Pasting ratio:	Color powder:	10	parts
	Medium:	6,5 – 8	parts
Screen:	270 steel		

Generally all media and lacquers currently obtainable can be used in combination with our I.100 colors.

As **flux for overprinting** we recommend: **096**
As **flux for overprinting and mixing Cd-colors** we recommend: **095**

Concerning the color layer a maximum thickness of 25 µm has to be observed before firing to avoid cracks and chips.

Firing conditions

The I.100 colors can be fired at temperatures between 1000 °C and 1260 °C.
The firing temperature and period have to be adjusted to the substrate, the glaze and the kiln.

Storage

The color powders have to be stored in a dry place, in sealed containers.
When they are processed with oils they have to be completely dry. If powders have absorbed humidity this leads to cheesy pastes that cannot be processed perfectly.

Safety

Ceramic colors are chemical products. Therefore guidelines valid for handling chemicals and the pictographs on the packaging have to be observed.

Information

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