

Technical Data Sheet

Solutions for Decoration

80 4084 - Pad Printing Medium

Application	<p>Due to the viscosity of medium 80 4084, which has been optimally adjusted for pad printing, and its very good dispersion properties, printing pastes with a high proportion of color and intense color can be made for inglaze and onglaze decoration of porcelain and ceramics (printing on smooth objects) and underglaze decoration of bone china, vitro-porcelain and earthenware (printing onto bisque surfaces).</p> <p>Color powder and printing medium are pasted at 70-80 °C using a heated three-roll mill. The color pastes made in this way can be printed at a relatively low processing temperature (printing plate temperature 65-70 °C).</p>
Printing properties	<p>The color pastes can be printed with either an etched steel or a plastic printing engraving. Due to the good knifing properties of the color pastes, the use of a plastic doctor blade has proved to be the best. Steel doctor blades are not recommended.</p>
Miscibility	<p>Included in the pad printing medium 80 4084 group are:</p> <p>Thinning medium 80 4085 (140 mPa*s at 1250 1/s at 65 °C)</p> <p>Both products are intermixable. Practice has shown that the correct processing viscosity can be achieved for all circumstances by adding up to a maximum of 20 % thinning medium 80 4085 to 80 4084. The procedure for optimizing the printing viscosity of an underglaze printing paste is described in detail by means of an example in the product data sheet for the thinning medium 80 4085. The same also applies to onglaze and inglaze printing pastes.</p>
Application errors	<p>The optimum processing temperature of the pastes is some 65-70 °C. Both the ambient temperature and that of the object being printed on should be between 20-22°C, in order to ensure a smooth operational procedure. Ideally these conditions are achieved by having controlled air conditioning. If the ambient temperature is above that recommended, the printing quality may be impaired, causing the details of the print to be less sharply defined. If the temperature is lower than recommended, the color is less intense and poor color release on to the object being decorated may occur.</p>
Storage	<p>80 4084 should be stored in a dry place at room temperature (15-25°C). At temperature above 30°C the medium can become gluey due to softening.</p> <p>When this storage recommendation is observed, the minimum shelf life in unopened original drums is 24 month.</p>
Environment	<p>Waste material treatment, environmental health and safety protection has to follow the local regulations and legislation.</p>

Field of application	on bone china, vitro or earthenware bisque surfaces
Processing	pad print made off nylograph or etched steel plate
Appearance	yellowish, waxlike compound
Composition	waxes, polymers and auxiliary materials
Viscosity at 23°C [mPa*s]	0 at 50 1/s ; 0 at 200 1/s
Degree of thixotropy	none
Consistency	flowing at 80°C
Density at 20 °C [g/cm³]	0,98
Non-Volatile parts (nvp) [%]	100
Flash point according to ISO 3680 [°C]	100
Recommended screen material	depending on color and design
Recommended pasting ratio	depending on the density of the used color
Drying	ba means of solidification
Drying figures TZ according to Mettler	TZ 10: ; TZ 100: cannot be measured
Recommended working temp. [°C]	65 - 70
Recommended rel. humidity [%]	55 - 60
Recommended Covercoats	- -
Thinner	80 4085
Cleaner	80 890

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