Technical Data Sheet

Solutions for Decoration

80 4086 - Printing Paste Thinner

Application

80 4086 was developed to return color pastes to original viscosity where solvent evaporation during printing has led to an increase in paste viscosity. It is a well-known fact that printing pastes become thicker and thicker during printing as a result of solvent evaporation. The consequence of this is that the color intensity also increases during printing. This is called production run-on color change. In comparison to the standard, the intensified color can lead relatively quickly to decals which cannot be used. Production run-on stability is essentially linked, therefore, to the speed at which the printing medium solvents evaporate. As a general rule: the slower a printing medium dries, the better the production run-on properties of this medium in terms of color constancy. By adding 2-3 % of thinner 80 4086 to a printing paste that has thickened due to evaporation, two positive effects can be achieved:
1. the printing paste becomes easily printable again and
2. the production run-on color constancy is within an acceptable range.
As adding thinner reduces the viscosity and makes the printing paste easily printable, printers often tend to use the addition of thinner in an uncontrolled way as a substitute for original printing media, in order to achieve higher printing speeds. Since the thinner contains no nvp constituents, this procedure can often lead to complaints, because adding too much thinner as a printing medium substitute causes the medium content of the printing pastes to be too low, and thus adversely alters the ratio of color powder to medium nvp content. In addition, the overprinting properties of a ceramic decal are adversely affected to a great extent. The pastes are too thick when printed and the stencils become quickly clogged on the underneath.

Printing properties

- -

Miscibility

- -

Application errors

Printing clarity may be reduced if too much thinner is added to the printing paste. If the thinner is used as a partial substitute for printing media, in order to obtain a printing paste of low viscosity, extreme care should be taken to make sure that the firing properties of the decal are not adversely affected. The thinner must be used, therefore, in a very controlled way.

Storage

80 4086 should be stored in the drums in which it was originally supplied by FERRO in a dry place at room temperature (15-25 °C). Always seal opened drums carefully as the composition of the product changes when solvents evaporate from open drums.

When this storage recommendation is observed, the minimum shelf life in unopened original drums is 2 years.

Environment

Waste material treatment, environmental health and safety protection has to follow the local regulations and legislation.

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Field of application	liquefying thickened printing pastes
Processing	by working into printing pastes
Appearance	clear liquid
Composition	terpenes, hydronaphthalenes, aromatic hydrocarbons
Viscosiy at 23°C [mPa*s]	5 at 50 1/s ; 5 at 200 1/s
Degree of thixotropy	none
Consistency	flowing
Density at 20 °C [g/cm³]	0,97
Non-Volatile parts (nvp) [%]	0
Flash point according to ISO 3680 [°C]	77
Recommended screen material	- -
Recommended pasting ratio	- -
Drying	- -
Drying figures TZ according to Mettler	TZ 10: ; TZ 100: not measured
Recommended working temp. [°C]	20 - 25
Recommended rel. humidity [%]	55 - 60
Recommended Covercoats	- -
Thinner	- -
Cleaner	80 452

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