

Technical Data Sheet

Solutions for Decoration

NR. 221 - Screen Printing Medium

Application	<p>Due to its excellent combustibility and depolymerization, NR. 221 can be used for applying decorations to glass, porcelain, ceramics and enamel.</p> <p>This medium shows less stickiness and can also be used for pasting ratios with higher amount of media.</p> <p>NR. 221 is also suitable for the heat release process.</p>
Printing properties	<p>NR. 221 is a flowing printing medium that displays very good printing properties for surfaces and lines with good reproduction of detail.</p>
Miscibility	<p>Included in the screen printing medium NR. 221 group are:</p> <p>NR. 221/THIX/1 low thix.</p> <p>NR. 221/THIX/2.2 medium thix.</p> <p>As all the printing media are based on redissolvable (reversible) resins, there is the risk, particularly with the flowing printing medium NR. 221 of ceramic decals produced with this medium becoming dissolved to such an extent when covercoated that the inks on vertical surfaces run together with the covercoat. The risk increases when the pasting ratios fall below a CPVC of 53%. All the media in this group can be mixed with one another, as required. To increase the viscosity and achieve a higher thixotropy, thus preventing the risk of running, mix flowing media with the thixotropic printing medium NR. 221/THIX/2.2.</p>
Application errors	<p>In the tables listed in section B3 we recommend the pasting ratios for all common color selections, in accordance with the maximum CPVC. Failure to adhere to these ratios, i.e. using less than the recommended minimum quantity of printing medium (M), can lead to firing defects such as pinholes etc.</p> <p>If the viscosity of the printing paste mixed according to the recommended pasting ratio is too high, problems with printing and production run-on often occur. In this case the viscosity can be reduced by adding 0.5 to a maximum of 1 % of our dispersing agent 80 604.</p>
Storage	<p>NR. 221 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.</p> <p>When this storage recommendation is observed, the minimum shelf life in unopened original drums is 2 years.</p>
Environment	<p>Waste material treatment, environmental health and safety protection has to follow the local regulations and legislation.</p>

Field of application	glass, porcelain, ceramics, enamel
Processing	with automatic and semi-automatic screen printing equipment
Appearance	opaque liquid
Composition	polyacrylates; plasticizer; solvents
Viscosity at 23°C [mPa*s]	605 at 50 1/s ; 600 at 200 1/s
Degree of thixotropy	none
Consistency	flowing
Density at 20 °C [g/cm³]	0,98
Non-Volatile parts (nvp) [%]	44
Flash point according to ISO 3680 [°C]	48
Recommended screen material	depending on color and design
Recommended pasting ratio	depending on the density of the used color
Drying	by means of solvent evaporation
Drying figures TZ according to Mettler	TZ 10: 92 ; TZ 100: 925
Recommended working temp. [°C]	20 - 25
Recommended rel. humidity [%]	55 - 60
Recommended Covercoats	can be overprinted with all FERRO covercoats
Thinner	80 4086
Cleaner	80 452

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