

Technical Data Sheet

Solutions for Decoration

87 4029 - Fixative

Application

Underglaze decoration with and without hardening on:

Due to the comparatively rough surface of unglazed bone china, vitro-porcelain or earthenware bisque, the bonding effect of the paper coat of ceramic decals is not sufficient to achieve the bond required between the decal and bisque surface. As a result, glaze and color crawls appear on the decal during sharp firing unless 87 4029 is used. In order to prevent this from happening, the areas to be decorated are coated with 87 4029, in the same way as when processing onglaze slide-offs. The decal removed with water is then laid immediately in the moist 87 4029 film and the water slime pressed out with a plastic or rubber squeegee. During the required 12-24 hours drying at room temperature the under-side of the decal becomes very tacky due to the effect of 87 4029, and bonds firmly with the bisque surface. After drying, the object is pre-heated to 130-160 °C, spray-glazed and then sharp-fired.

In practice this product has proved its worth for many years. Another use for 87 4029 is the "decoration of ceramic articles on unfired, raw glaze".

For this decorative technique the glaze must first be fixed and touch-dry. Apart from this the decoration is applied in exactly the same way as described above for bisque surfaces. Decorated once-fired ware can be made in this way.

Printing properties

87 4029 is particularly well-suited to decorating earthenware, as the thixotropy prevents the fixative 87 4029 from sinking in too quickly. The decal can be moved around easily while applying the decoration. For raw glaze decoration please obtain the special description of this process.

Miscibility

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Application errors

If the freshly decorated object is not dried for long enough, blistering may occur when it is pre-heated before glazing. As blistering prevents the decal from bonding sufficiently with the bisque surface, color and glaze crawls will form.

Storage

87 4029 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 12 months.

Environment

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

Field of application	feldspathic ware, bone china, vitro bisque surface
Processing	with automatic and semi-automatic screen printing equipment
Appearance	pink emulsion
Composition	cellulose derivatives, plasticizer, solvent
Viscosity at 23°C [mPa*s]	915 at 50 1/s ; 400 at 200 1/s
Degree of thixotropy	low
Consistency	thixotropic
Density at 20 °C [g/cm³]	0,97
Non-Volatile parts (nvp) [%]	2,1
Flash point according to ISO 3680 [°C]	48
Recommended screen material	- -
Recommended pasting ratio	- -
Drying	- -
Drying figures TZ according to Mettler	TZ 10: ; TZ 100: cannot be measured
Recommended working temp. [°C]	20 - 25
Recommended rel. humidity [%]	55 - 60
Recommended Covercoats	- -
Thinner	water up to 2 % maximum
Cleaner	water

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