

# Technical Data Sheet

Solutions for Decoration

## 80 2023 - Heat-Release Adhesive

<b>Application</b>	80 2023 is a heat-activated adhesive for the reel-to-reel heat-release decorative process. The decals for this process are mainly produced as reel decals and, in comparison to the indirectly transferred heat-release decals, the printing sequence is reversed. First of all a covercoat, e.g. 83 894, is printed, then the inks, and last of all a coat of 80 2023. The adhesive effect of this coat depends largely on the printing thickness. The thicker the layers of ink, the thicker the coat of 80 2023 has to be to achieve a good bond with the object being decorated. If the adhesive effect is insufficient, the finished decal should first be overprinted with 80 2018, using a thin stencil. The adhesive 80 2023 is then printed to the recommended dry film thickness of approx. 10 µm. The application temperature should be between 70-100 °C; this is obtained with a stamp temperature of 140-160 °C.
<b>Printing Properties</b>	The thin adhesive film necessary for the heat-release technique means that high printing speeds can be achieved with this adhesive. The drying time is considerably shorter than that of standard covercoats.
<b>Film characteristics</b>	After the solvents have evaporated, 80 2023 produces a silk-matt, tack-free film. The characteristics have been optimized for the "reel-to-reel" heat-release process. The dry film thickness should be some 10-15 µm.
<b>Application errors</b>	If the recommended processing temperature of 20-25 °C is not observed, i.e. the temperature is lower, this may result in poor levelling properties on the printed surface, the film thickness may be insufficient and there may be pinholes in the dry film. If the film of 80 2023 is too thin, the adhesive effect is insufficient for the transfer process and the decal cannot be transferred satisfactorily.
<b>Storage</b>	80 2023 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 month.
<b>Environment</b>	Waste material treatment, environmental health and safety protection has to follow the local regulations and legislation.

<b>Field of application</b>	porcelain, ceramics, HR: Reel to Reel
<b>Processing</b>	with automatic and semi-automatic screen printing equipment
<b>Appearance</b>	opaque liquid
<b>Composition</b>	cellulose derivatives; plasticizer; solvents
<b>Viscosity at 23°C [mPa*s]</b>	1300 at 50 1/s ; 700 at 200 1/s
<b>Degree of thixotropy</b>	none
<b>Consistency</b>	flowing
<b>Density at 20°C [g/cm<sup>3</sup>]</b>	0,95
<b>Non-Volatile parts (nvp) [%]</b>	43
<b>Flash point according ISO 3680 [°C]</b>	42
<b>Recommended screen material</b>	PET: 48-80 to --
<b>Blocking stability</b>	tack-free
<b>Minimum dry film thickness [µm]</b>	8-10
<b>Drying figures TZ according to Mettler</b>	TZ 10: ; TZ 100: not measured
<b>Recommended working temp. [°C]</b>	20 - 25
<b>Recommended rel. humidity [%]</b>	55 - 60
<b>Thinner</b>	--
<b>Cleaner</b>	80 452

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