80 4540 - 1C-Protective Coat

**Application**
80 4540 is the 1-component protective coat used to overprint Xpression decals. Overprinting with 80 4540 ensures that the strippable coating or transfer coating 80 2039 can be removed.

After thermal curing, the decorative decal acquires a glossy surface as a result of applying protective coating 80 4540 and achieve the mechanical and chemical resistance.

**Printing properties**
80 4540 is a flowing coating with very good printing properties for overprinting low-temperature decorative decals.

PET 90-48 to PET 120-40 polyester screens are recommended for printing

**Drying**
The drying time depense on the thickness of the printed layer. The protective coating overprint should be thoroughly dried, since too much residual solvent content can lead to a high degree of dissolution when the strippable coating is applied, and thus make it very difficult to remove strippable coating 80 2039 from the decorative decal.

In order to ensure that strippable coating 80 2039 can be removed from the decorative decal, the decal must be thoroughly dried. The safest method is to dry overnight in a ventilated wicket dryer. With constant ventilation (wicket dryer): minimum 2-3 hours

In multi-shelf dryers (depending on ventilation): minimum 12 hours

**Application errors**
80 4540 is well suited to printing with fine screens.

If coarser screens are used, e.g. 77-48 PET polyester, pinholes may occur.

The protective coat can not be used as a covercoat like 80 2039.

It is not suited for handling and applying a decal.

Only the stripable coat 80 2039 makes the Xpression decal transferable.

Due to the thermal curing the polymerisation will generate the final properties of the Xpression decals. Therefore the thermal curing is essential.

In case of decorating thermal sensitive objects the 2-component protective coat 80 4552 (with adding the hardener 80 4553) can be used.

**Thermal curing**
Together with the overprinted decorative decal:
approx. 30 min. at 160°C or approx. 20 min. at 180°C or 15 min. at 200°C

**Storage**
80 4540 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.
# 80 4540 - 1C-Protective Coat

- **Field of application**: glass, porcelain, enamel, aluminium, stainless steel, et al.
- **Processing**: with automatic and semi-automatic screen printing equipment
- **Appearance**: transparent liquid
- **Composition**: polyurthan polymer, catalysts, solvent

## Viscosity at 23°C [mPa*s]
- 1100 at 50 1/s
- 1050 at 200 1/s

## Degree of thixotropy
- none

## Consistency
- flowing

## Density at 20 °C [g/cm³]
- 1,05

## Non-Volatile parts (nvp) [%]
- 50

## Flash point according to ISO 3680 [°C]
- 50

## Recommended screen material
- Steel: 300-30 to 450-26; PET: 90-48 to 120-31

## Blocking stability
- -

## Minimum dry film thickness [µm]
- -

## Drying
- by means of solvent evaporation

## Recommended working temp. [°C]
- 20 - 25

## Recommended rel. humidity [%]
- 55 - 60

## Thinner
- 80 890

## Cleaner
- 80 890

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**Limitation of Warranty and Liability**

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