
ORMOJET Inkjet

This technical information is valid for:

ORMOJET Inkjet

1. General

Based on the well known Ormoglass paints for glass, ORMOJET Inkjet inks are specifically developed for digital printing. The inks are optimized for the use with piezo print heads of the DX 4 (Epson*) type.

2. Storage and handling

Ormojet inkjet is a one-component system. We recommend to use the inks within of 3 months after filling date. The inks shall be stored at a cool place, protected from sunlight.

ORMOJET Inkjet is flammable. Do not smoke, keep away from sources of ignition. Read and understand the valid material safety data sheet before working with the material.

The cured coating is not harmful. ORMOJET Inkjet can be used for prints on toys, according to the European standard EN 71/3.

For flushing and cleaning of the printing heads, a flushing fluid (cleaner blue) is available. Residue of other inks or water has to be removed completely before filling with ORMOJET Inkjet.

3. Substrates

ORMOJET Inkjet was originally designed for the decoration of glass. But also Ceramics, porcelain, metals, plastics, leather and foamed plastics can be durable printed with ORMOJET Inkjet.

To achieve good adhesion, the surface of the substrate has to be free from any foreign matter. In many cases, a pre-cleaning process is necessary to remove fatty or soiling layers, finger prints etc.

Only by storage, the surface properties of many substrates can change, which may affect the adhesion of the print. Next to a cleaning, a surface activation, e.g. by a plasma or flame treatment, can be helpful to improve adhesion of the print.

Glass:

Lamination with a PVB foil is possible. For best adhesion, we recommend to print on the tin (bath) side of float glass. If the laminated glass is used as safety glass, it might be necessary to activate the print before lamination e.g. by flame treatment.

Aluminium:

The Ormojet ink type 6.797 can be directly printed in freshly prepared anodizing layers. The print will be fixed by condensing of the anodizing layer. Further curing is normally not necessary.

Plastics:

Plastics can be printed with Ormojet types 7.0025 and 9.4302. Even without thermal curing, good adhesion to plastic surfaces is possible.

*Epson is a registered trademark

4. Application

ORMOJET Inkjet is optimized to be used with the printing heads DX 4, the ink 9.4302 was designed for use in DX 7 print heads. We do not have experience concerning the use with other printing heads. ORMOJET Inkjet can be used until a relative humidity up to 60%. In case of higher humidity, the formation of the layer may be disturbed, resulting in dull coatings. In such cases it is useful to warm up the substrate before printing.

5. Curing

For many applications ORMOJET Ink is sufficiently durable without explicit curing. To achieve solvent resistance, a thermal curing process can be applied. The recommended holding times are: 160°C: 30 minutes, 180°C: 10 minutes, 190°C: 5 minutes. The temperatures are object temperatures, measured at the printed surface.

Lower than the recommended curing temperatures or too short curing time, may result in reduced water – and solvent resistance. If the temperature is too high, there may be discoloration by thermal degradation. Curing temperatures above 200°C should be avoided due to thermal degradation; the degradation products may be harmful.

Exceeding the curing time is in most cases uncritical.

We recommend to test with the furnace, in many furnaces the temperature is uneven, so the object temperature may differ from the displayed furnace temperature.

6. Available Types:

- ORMOJET Inkjet Type 6.797 Set CMYK, dye based
- ORMOJET Inkjet Type 7.0025 Set CMYK and White, pigment based
- ORMOJET Inkjet Type 9.4302 Set CMYK and White (opaque) and Clear, pigment based
- Cleaner blue for system cleaning
- Head protection fluid for flushing the system before long-term idle times

Special colours are available on request.