

How to Print on Acrylic using OrcoSperse™ Pigment Dispersions

Basic information regarding the printing on acrylic using **OrcoSperse™** aqueous pigment dispersions is shown below. There are many parameters and variables involved with pigment printing--pigment printing concerns itself with the following basic factors:

Pigments

OrcoSperse™ are aqueous pigments nonionically or anionically dispersed. These may or may not be resin bonded.

Low-Crock

This is a resinous material, usually acrylic or styrene butadiene latex which, in some cases, is compounded with a melamine formaldehyde resin to improve cross-linking and thus improving washfastness.

Clear Concentrate

This is usually a synthetic polymer dispersed in an emulsion or colloid which swells and increases in viscosity when dispersed in water usually with high shear mixers like a Barenco or a Hill homogenizer.

Pigment Printing Procedure:

1. Prepare typical print paste(*100 parts total*) with the following:
 - 1-8 parts **OrcoSperse™** pigment concentrate
 - 1.5-2.5 parts **Orco Clear Conc SP-2™**
 - 5-10 parts **Orco Low-Crock T-550™**
 - X parts Water
2. Charge tank as follows in order listed:
 - X parts Cold Water
 - 1.5-2.5 parts **Orco Clear Conc SP-2™**
3. Run a high-speed mixer 10-12 minutes until smooth.
4. Add 5-10 parts **Orco Low-Crock T-550™**.
5. Add desired amount of **OrcoSperse™** Pigment print paste prepared above and continue mixing for 4-8 minutes until dispersion is complete.
6. Check viscosity. If a higher viscosity is desired, add additional **Orco Clear Conc SP-2™** with mixing for 5-7 minutes.
7. Print material on either a flat-bed screen or rotary screen.
8. Cure at a minimum of 275-300°F(135-150°C) for 60-90 seconds.