

Technical information

Screen Inks



Micro Poxy - EX

Quick Drying, Glossy Finish, Opaque

Screen Inks for Packaging



Substrates :

Pre-treated Polyethylene, Polypropylene, Coated substrates, Powder coated Metals, Thermosetting plastics

Application

Micro POXY - EX are two component inks based on special epoxy resin system to print packaging containers and articles of polyethylene, HDPE, polypropylene. The surface of these substrates should be pre-treated by flaming or corona discharge so as to get surface tension of 42-44 dynes/cm. which is necessary for the adhesion of these inks. For polypropylene, the surface can also be pre-treated by applying a thin coat of PP Primer AX-701

Two Pack inks provide excellent resistance to common solvents and various chemicals. These inks can also be used to print on thermosetting plastics, coated substrates, powder coated articles and metals. These inks can be used for printing on glass and ceramic substrates for decorating purpose

- Packaging containers and articles of polyethylene, HDPE, polypropylene
- Thermosetting plastics, coated substrates, powder coated articles and metals
- Glass and ceramic substrates for decoration purpose

Characteristics

These are two-component inks based on epoxy resin to provide the following outstanding features:

- Resistant to common solvents and chemicals
- Excellent adhesion and mechanical resistance for long life
- High gloss finish
- Non-toxic, meets EN- 71 part 3 Toy safety standard for heavy metals

Mixing ratio :

Ink and hardener HDR-611 are to be thoroughly mixed in the ratio 80:20 by weight (Ink 4 parts: Hardener 1 part)

Pot life of mixed ink and hardener:

5-6 hours at ambient temperature (around 25° C)

Increase in the room temperature than 25° C can lead to reduced pot-life. The addition of freshly prepared ink + hardener mixture can extend the pot life

Drying

Drying of the ink film takes place by evaporation of the solvents used and further drying and hardening is caused by chemical cross-linking reaction between ink and hardener.

The print becomes tack free dry in 25-30 minutes and can be ready for overprinting in 40-50 minutes at ambient temperature (25° C) and also making them suitable for stacking.

It takes about 5-7 minutes to become tack-free dry when passed through a tunnel oven at 80-90° C.

The drying time depends on the printed ink film thickness, humidity, drying conditions and the auxiliaries used such as reducer and/or retarder.

We recommend to carry out the overprinting within 4-6 hours in order to achieve good adhesion between the ink layers.

The prints get **fully cured** after 72 hours when the tests for adhesion, solvent/chemical resistance can be performed.

Stoving :

120-150° C for 20-30 minutes in box oven can completely cure the ink for glass and metal. These inks can be used for decorative purpose when used for glass and ceramic substrates and are not resistant to dish-washing.

Range

Micro POXY-EX Matching System : Almost any shade can be matched by mixing the selective inks of the matching system which comprises of the basic shades as follows :

Match Light Yellow	EX -101	Match Violet	EX -141
Match Mid Yellow	EX -102	Match Ultra Blue	EX -151
Match Deep Orange	EX -111	Match Deep Blue	EX -152
Match Scarlet Red	EX -121	Match Green	EX -161
Match Carmine Red	EX -122	Match Tinting White	EX -171
Match Magenta	EX -131	Match Tinting Black	EX -181
Mixing Clear Base	EX -191	Mixing Extender Base	EX -192

Spot Colours

Bright Yellow	EX -201	Reflex Blue	EX -253
Light Orange	EX -211	Yellow Green	EX -261
Vermilion	EX -221	Grass Green	EX -262
Brilliant Red	EX -223	Forest Green	EX -263
Purple	EX -241	Opaque White	EX -271
Sky Blue	EX -251	Brilliant White	EX -272
Royal Blue	EX -252	Dense Black	EX -281

Process Colours

Cyan	EX -401	Density : 1.5
Magenta	EX -402	Density : 1.4
Yellow	EX -403	Density : 1.3
Black	EX -404	Density : 1.8

The density values are arrived at by using 140.31 T mesh at a dilution of 10% with Reducer. By adding Extender Base EX-192, the ink density can be reduced. The ink density can be increased by adding ink concentrates for the process colours in required proportion or by using a coarser mesh

A coat of Over Print Varnish EX-193 on the whole printed area will extend the period of out-door fade resistance. (Mixing ratio: EX-193 and Hardener HRD-611 is 3:1)

Yield : 60-70 sq. meters. (with 120 mesh/cm. and 10-15% dilution with Reducer/Retarder)

Metallic Inks (Bronzes)

Rich Gold	SH - 801
Rich Pal Gold	SH - 802
Silver	SH - 804
Metallic Clear Base	EX -191

Recommended mixing ratio of Metallic Gold Pigment with EX-191 (without hardener) is 1:4

Recommended mixing ratio of Metallic Silver Pigment with EX-191 (without hardener) is 1:6

Mixing ration of mixture of metallic pigment and Clear Based with Hardener HRD - 611 is 4:1

The Metallic ink made (by mixing metallic pigment + clear base + hardener) should be processed with in 6 - 8 hours

SCREEN ATM:

Any Quantity - Any Colour - Any Substrate - Any Time

Micro Inks revolutionises screen inks with its Screen Inks ATM (Any Time Matching). Get your screen inks in 15 minutes flat.

Micro Inks Limited offers INSTANT COLOUR MANAGEMENT SOLUTION to commercial printers, packaging companies and distributors by introducing Computerized Colour Matching Software.

Contact us for detail information on Technology, Infrastructure and Equipments.

Auxiliaries

Reducer : AX-901 can be added 10 to 20% to the ink to get desired consistency

Retarder : AX-902 can be added 10 to 20% to the ink to get desired consistency when require to make the ink slow drying.

Even a suitable combination of the Retarder with the Reducer can be used to get desired retarding effect

Quick Dry Reducer : AX-903 can be used instead of AX-901 for very high speed printing job

Over Print Varnish EX -193: For improvement of fade resistance of the print

Accessories

Fabric : Polyester or Nylon mesh of 90-140T are suitable. Even 77-90T can be used depending upon the type of job and the substrate to be printed to achieve desired opacity or print effect. Recommended 77-90 mesh/cm. for long-term out-door use

Stencil: All solvent resistant stencils can be used

Squeeze : Generally 65-75 durometer sharp edge squeezes are suitable.

Material Safety Data Sheet is available on request

Note : The Technical information sheet reflects the current state of our knowledge. This information is compiled based upon field experience and extensive laboratory testing. However, customers are requested to satisfy themselves that the products meet their requirements in all respects before starting a print run. Since the printing conditions are not under our control, no guarantee can be given for their performance.