

## POLYCOL ONE-COAT

### DESCRIPTION:

POLYCOL ONE-COAT is a very-fast exposing, pre-sensitized SBQ "One Pot" emulsion for printing with plastisol, water-based, and discharge inks.

When printing with water-based or discharge inks, use Diazo D, (supplied separately upon request) for maximum resistance.

POLYCOL ONE-COAT is uniquely developed to address the needs of the busiest screen printers. Coating, drying, and exposing times are significantly reduced to provide printers maximum screen throughput enabling them to keep up with the demands of a high volume screen shop.

Interestingly, the very fast exposing, one year pot life features of POLYCOL ONE-COAT also benefit the smaller printer who uses a weaker light source and consumes less than a gallon per month.

High resolution and good mesh bridging combined with its wide exposure latitude make it suitable for fine detail printing.

### SENSITIZING:

Pre-sensitized -- ready to use. Diazo D may be used when printing with water-based and discharge ink systems.

### MESH PREPARATION:

To achieve a good stencil, the mesh must be degreased with a commercial degreaser such as KIWO Degreaser 1:20 or PREGAN A9 and must be free of dirt, dust, ink residues and ghost images. Rinse the screen thoroughly using low water pressure to remove any degreaser remaining on the screen and inside surfaces of the frame. A foaming degreaser such as KIWO DEGREASER 1:20 or PREGAN A9 helps to determine proper and complete rinsing. See KIWO DEGREASER 1:20 or PREGAN A9 technical information sheets for details.

### COATING PROCEDURE:

POLYCOL ONE-COAT has excellent coating properties on all mesh counts commonly used for textile printing. It is formulated to achieve optimum stencil thickness for most printing applications with a simple 1-1 coating technique using a round edged coating trough. This will reduce screen coating times and reduce costly labor time.

Always start on the substrate side of the screen to fill the mesh openings; then finish on the squeegee side to build up the emulsion coating to the desired thickness. The correct coating technique for your specific process *must be determined through coating tests*.

Contact KIWO for more specific coating techniques.

### DRYING OF THE COATED SCREEN:

Dry screens horizontally, substrate side down in complete darkness, or under safelight conditions.

Many variables affect drying times such as: temperature, relative humidity, airflow, and coating thickness. The screen must be dried thoroughly before exposing to achieve highest resistance to ink and ink cleaners.

A temperature of 86°-104°F (30°-40°C) at a relative humidity of 30% -50% and moderate airflow are optimum conditions. Drying at room temperature and in uncontrolled conditions may lead to inconsistent results and varying screen resistance.

### EXPOSURE:

Expose with ultra-violet light at a 320 – 380 nm wavelength. A metal halide lamp provides the best results. Due to the many variables that determine the actual exposure time, accurate exposure times cannot be given. The following examples are offered as a guide only:

Lamp: 5000-Watt metal halide at 40" (1m) distance.

156/62 tpi (60/62 tpcm) yellow mesh, coating technique 1-1.

Exposure time: approximately 35 seconds.

305/34 tpi (120/34 tpcm) yellow mesh, coating technique 1-1.

Exposure time: approximately 12 seconds.

NOTE: If using Diazo D with this product, exposure times will increase by up to 300-400%.

The correct exposure time for your equipment and mesh selection *must be determined through exposure tests* using a stepped exposure test or an exposure calculator such as the KIWO QUICKCHECK.

Under-exposed screens feel slimy on the squeegee side during developing. At correct exposure time, the screen is not slimy. Overexposure leads to loss of detail. Correctly exposed screens will withstand high tap water pressure during washout.

Contact KIWO if you have further questions regarding exposure time and developing techniques.

### DEVELOPING / WASHOUT:

Develop the screen using full tap water pressure with a medium to fine spray pattern. Water temperature can range from lukewarm to cold. If the emulsion is thoroughly dried and properly exposed, one can use a high pressure washer up to 1500 psi on fan spray setting at a minimum of 12 –18 inches distance to improve consistency of developing, and to speed screen processing time.

Wet both sides of the screen, then rinse primarily from the substrate side of the screen. Conduct a final rinse from the squeegee side to remove any remaining residue. Vacuum off excess water or blot it off with newsprint paper to avoid runs or scum from under-exposure in the open areas.

**POST-EXPOSURE:**

Post-exposing the screen after developing and drying can improve stencil durability to a limited degree. Post expose from the squeegee side for up to four times the original exposure time.

**POST-HARDENING (CHEMICALLY):**

The emulsion can be chemically post-hardened for maximum resistance when printing with water-based and discharge inks.

Two types of hardeners are available:

- 1) KIWO HARDENER HP can be applied to a damp, fully developed screen to improve water resistance. When using HARDENER HP, one can still reclaim the emulsion.
- 2) Using KIWO's HARDENER K or HARDENER AWR offers outstanding resistance and is recommended when using discharge ink systems. Using these types of hardeners results in an un-reclaimable, permanent stencil. See HARDENER AWR or HARDENER HP Technical Information Sheets for details.

**BLOCKOUT / TOUCH-UP:**

When printing with plastisol, UV and solvent based inks, retouching, blocking out can be done with KIWO TOUCH-UP and KIWO RED BLOCKOUT. See KIWO TOUCH-UP and KIWO RED BLOCKOUT Technical Information Sheets for details.

For water-based inks retouching and blocking out is often done with the emulsion, but can also be done with KIWO BLOCKOUT WR.

**DECOATING:**

POLYCOL ONE-COAT can be decoated with emulsion removers such as KIWO STENCIL REMOVER 1:20. Before decoating, ensure the screen is completely cleaned of ink or ink cleaning chemical residues. If water beads up on the stencil, degrease the screen prior to decoating. See the KIWO STENCIL REMOVER 1:20 Technical Information Sheet for details. If the screen was chemically hardened with HARDENER K or AWR, reclaiming is no longer possible.

**HAZE REMOVING:**

When under-exposed, the emulsion can cause emulsion haze after reclaiming. To remove haze, use KIWO HAZE REMOVER, MEGA CLEAN ACTIVE, or PREGAN PASTE. For best performance use the haze removing products with the KIWO EXCEL INK WASH or KIWO ULTIMATE INK WASH. These products are also very effective at removing ink stains. See separate Technical Information Sheets for these additional products for more details.

**PHYSICAL PROPERTIES:**

Viscosity: Approx.: 5,500 mPas

Solids Content: Approx.: 44%

Color:	Blue
Storage:	1 year at 68°F/20°C
Pot Life:	1 year at 68°F/20°C
Precoated Screens:	8 weeks in complete darkness at 68°F/20°C
Freezing:	Protect against freezing
VOC:	None
TLV:	N/A
HMIS rating:	Health – 1 Flammability – 0 Reactivity – 0

**PACKAGING:**

1 US Quart, 1 US Gallon, 5 US Gallons, 32 US Gallon Drum.

**ADDITIONAL INFORMATION:**

For additional product information, please visit our web site at [www.kiwo.com](http://www.kiwo.com). All products mentioned in this technical data sheet are available through KIWO Inc. and its distributor network. For further information contact your KIWO distributor or KIWO direct.

Thank you for choosing KIWO.



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