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POLYCOL DRY-TOUCH

1. DESCRIPTION

POLYCOL DRY-TOUCH is a pre-sensitized SBQ-photopolymer emulsion for textile printing with plastisol and silicone inks and graphics printing with UV and mild solvent-based inks. Its anti-tack surface will not stick to inkjet film positives. Its teal color provides high transparency for easy see-through registration.

POLYCOL DRY-TOUCH features high solids, fast drying, fast exposure and easy reclaiming. It is also compatible with Computer-to-Screen imaging systems that utilize water-based inks. Its wide exposure latitude makes it suitable for fine detail printing.

2. SENSITIZING

Pre-sensitized – ready to use.

3. DEGREASING

To achieve consistent, good quality stencils, degrease mesh with a good quality commercial degreaser such as KIWO's DEGREASER 1:20 CONCENTRATE or ULTRA PREP. For degreasers used in automatic equipment, KIWO offers a specially formulated machine grade degreaser KIWOCLEAN DEGREASER 1:40 CONCENTRATE. See separate Technical Information sheets for further details regarding KIWO's degreasers.

For best results, thoroughly brush both sides of screen with degreasing agent. Using a pressure washer to remove degreaser will help remove stubborn mesh contaminates, but may also re-introduce impurities to the mesh caused by blowback from the washout booth. To reduce blowback risk, perform a final flood rinse using low water pressure.

Mesh should be free of all contaminates such as ink and emulsion residues, oil, dust, and ghost/haze images prior to emulsion coating.

4. COATING PROCEDURE

Coating can be done manually or by machine. The use of a KIWOMAT® coating machine is especially recommended because it achieves a more reproducible coating result. When coating manually, begin on the substrate side of the screen with wet-on-wet coats using a round-edged coating trough until emulsion surfaces on the squeegee side (generally 2 coats). Then finish with wet-on-wet coats on the squeegee side to build up the emulsion coating to the desired thickness (generally 1-3 coats) depending on the printing requirements.

POLYCOL DRY-TOUCH has excellent coating properties on mesh counts of 40-305 threads per inch (16-120 threads per cm). For best printing results, the following coating techniques are recommended using a **round-edged (2 - 2.5 mm) coating trough**:

25 - 60 tpi (10 - 23 tpcm): 2-1 wet-on-wet
83 - 195 tpi (32 - 77 tpcm): 2-2 wet-on-wet
230 - 355 tpi (90 - 140 tpcm): 2-1 wet-on-wet

Tpi = threads-per-inch; tpcm = threads-per-centimeter

For specific applications, and due to varied screen room equipment and conditions, the correct coating technique for your process *must be determined through coating tests*.
Contact KIWO for more specific coating techniques.

5. DRYING

Dry emulsion coated screens in complete darkness, or under safelight conditions, in a horizontal position with the substrate side facing down. Temperature, relative humidity and airflow affect the drying time. Screens must be *dried thoroughly* before exposing to achieve highest chemical (ink and ink cleaners) and mechanical (abrasion) resistance. Environmental conditions play a vital role. *Temperatures of 86°-104°F (30°-40°C) with a relative humidity of 30% - 50% maximum and moderate airflow are optimum conditions*. Drying at room temperature and in uncontrolled conditions may lead to inconsistent results and varying screen resistance.

TIP: Keep screens and *all* screen handling areas dry until exposure is complete. This includes storage, exposure preparation, *and* exposure areas, as photo emulsions reabsorb moisture if reintroduced to high humidity environments. Emulsions do not become humidity resistant until exposure, washout and drying are complete.

6. EXPOSING

Expose with ultra-violet light at a wavelength of 350 – 420 nm. *Metal halide lamps provide the best results*. Due to the many variables that determine optimum 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:

Mesh Count - Thread Diameter (tpcm)	Mesh Color	Coating Technique Round Edge	Exposure Time
110-80 (43)	White	2-2	~20 sec.
156-64 (61)	Yellow	2-2	~ 20 sec.
305-34 (120)	Yellow	2-1	~ 10 sec.

Correct exposure times for your equipment and mesh selection must be determined through exposure tests using an exposure calculator such as the KIWO® ExpoCheck.

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 small details. Correctly exposed screens will withstand high water pressure during washout.

Please contact KIWO if you have further questions regarding exposure time.

7. DEVELOPING / WASHOUT

Develop the screen using full pressure tap water and a medium spray pattern. Adjust the water temperature to lukewarm or slightly colder. Rinse thoroughly from both sides of the screen. Vacuum off

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any excess water or blot it off with blank newsprint paper. This will avoid runs or scum from under-exposure in the open areas.

8. POST-EXPOSURE

Post-exposing the screen after developing and drying will improve chemical and mechanical resistance but requires four times the original exposure time. Exposing the screen fully with the primary exposure offers better resistance than under exposing initially, then post-exposing. Post exposure is most often used for long printing runs and/or when water based and/or abrasive inks are used.

9. POST-HARDENING (CHEMICALLY)

The emulsion can be chemically post-hardened using one of KIWO's stencil hardeners. Stencil hardeners can be classified as reclaimable or un-reclaimable.

If reclaiming ability is desired, use KIWO HARDENER HP or HARDENER WR.

If a permanent un-reclaimable stencil is desired, for example when cataloging screens for future use, or when aggressive inks are used for very large print runs, use KIWO HARDENER K.

See separate Technical Information sheets for further details regarding KIWO's stencil hardeners.

10. BLOCKOUT / TOUCH-UP

Retouching and blocking out can be done with KIWO's BLOCKOUT (blue) or RED BLOCKOUT.

See separate Technical Information sheets for further details regarding KIWO's blockouts.

11. RECLAIMING

POLYCOL DRY-TOUCH can be reclaimed with KIWO's STENCIL REMOVER 1:20/1:50 CONCENTRATE. Before reclaiming, ensure the screen is completely cleaned of ink or ink cleaning chemical residues

For best results, work both sides of the screen i.e. apply stencil remover, brush, and pressure wash both sides of the screen. After applying stencil remover, a short dwell time may be used prior to pressure washing to allow more working time for the stencil remover especially when using coarser meshes and/or thicker stencils.

CAUTION: Never allow stencil removers to dry prior to removal, as the emulsion will become locked into the mesh and virtually impossible to remove.

See separate Technical Information sheets for further details regarding KIWO's stencil removers.

12. HAZE REMOVING

Fresh ink stains alone can be effectively removed with EXCEL INK WASH or KIWOCLEAN® CONCENTRATED INK WASH without the use of caustic haze removers.

To remove emulsion haze or stubborn ghost images left from the ink, use KIWO's MEGA CLEAN ACTIVE, FAST LIQUID HAZE REMOVER, or HAZE REMOVER.

MEGA CLEAN ACTIVE and FAST LIQUID HAZE REMOVER work in approximately five minutes and effectively remove both emulsion haze and ink ghost simultaneously.

KIWO HAZE REMOVER should be applied to a dry screen, then allowed to completely dry on the screen. For more effective ink ghost removal, HAZE REMOVER can be used in conjunction with or EXCEL INK WASH to re-activate dried HAZE REMOVER.

For maximum effectiveness, haze removers, like ink washes and stencil removers, should be worked into the screen mesh from both sides of the screen before removing.

See separate Technical Information sheets for further details regarding KIWO's haze removers.

13. PHYSICAL PROPERTIES

Viscosity:	approx.: 9,000 mPas
Solids Content:	approx.: 41%
Color:	Teal
Storage:	18 months at 68°F/20°C
Potlife:	18 months at 68°F/20°C
Pre-coated 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

14. PACKAGING

1 US Quart, 1 US Gallon, 5 US Gallons

15. ADDITIONAL INFORMATION

For additional product information, please visit our web site at 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 authorized KIWO distributor or KIWO direct.

Thank you for choosing **KIWO**.