

Sericol TMI II Screen Inks: Opaques, Transluents, Transparents

Instructional Bulletin #3.22 (Revision 4)

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1.0 Scope

- Avery Dennison recommends the use of Sericol's TMI II Transit Marking Ink, used in conjunction with an approved overprint clear coat, for long-term applications, including fleet. NOTE: For information regarding other Sericol screen inks and Sericol clear coats, refer to the appropriate Instructional Bulletin.
- TMI II Opaque, Translucent, and Transparent inks are available in two distinct forms:

1.1 Pre Mixed

- TMI II pre-mixed inks are available in a wide range of both standard and color-matched colors.

1.2 Single Pigment Base (Toner) Color System

- The TMI II Base Color System allows for complete color matching in your shop. All colors are high pigment strength inks that are completely intermixable and are available in a variety of colors. For a list of these colors, please see Sericol's literature.

2.0 Thinning of TMI II Inks

2.1 TMI II Pre-Mixed Inks

- TMI II pre-mixed inks should be thinned according to your particular job requirements. Beyond this, no additional thinning is required.

2.2 TMI II Single-Pigment based (Toner) Color System

- All TMI II opaque, translucent, and transparent colors will require thinning. Using the appropriate TMI II thinner, a viscosity of approximately 30 seconds in a #5 Zahn cup is suggested (usually 15-20% by weight).* NOTE: Add solvents to the ink slowly, while mixing, to avoid agglomeration.

Description	Product #
TMI II 960 Regular Thinner	K-37270
TMI II 970 Slow Thinner	K-59626
TMI II 980 Retarder	K-67020

*NOTE: Start with a TMI II 960 regular thinner. Adjust with TMI II slow thinner or retarder if necessary to improve screen stability. **The use of the slow thinner or retarder will increase normal ink drying times.**

3.0 Application of TMI II Inks

- Use a properly tensioned monofilament polyester mesh screen, as listed below, when printing all TMI II Opaque, Translucent, and Transparent inks.

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Ink Type	Suggested Mesh Count	Squeegee Durometer
TMI II Opaque	180 - 220	70
TMI II Transluents	180 - 220	70
TMI II Transparents	220 - 305	60

NOTE: When tensioning screens for close tolerances and registration, tension the fabric to 16-22 Newtons (N/cm). Any suitable (lacquer-proof) stencil system may be used (i.e., direct method or capillary films). Prior to production, it is recommended to test the compatibility of the stencil and ink system.

4.0 Drying of TMI II Inks

- The following chart gives the relative drying times based on single color prints and multiple color overlaps of a 0.25 in (6mm) or more (prior to a clear coat being applied). It is based on the inks being thinned with TMI II K-37270 regular thinner. NOTE: Differences in ambient temperature, humidity, or equipment may alter actual dry times.

4.1 Jet Drying

- Jet drying individual TMI II opaque, translucent, or transparent colors can be accomplished as follows:

Single Color Print (No Overlap)	Overlapping Colors
45 Seconds at 160°F. (70°C)	60 Seconds at 160°F. (70°C)

NOTE: Dwell time listed is total belt time. At least 60% of the total belt time should be in the heat chamber. These times are considered the minimums required before stacking. For the purposes of registration on multi-color jobs, the use of batch oven drying between colors is not recommended. After jet drying the final TMI II color, and prior to overprint clear coating, prints may be required to be racked and batch oven dried, depending on the clear coat used, to assure all residual solvents are removed. See Clear Coat Processing Bulletins (Instructional Bulletins #3.11 and #3.23) for further details.

- For further information regarding the processing of Avery Dennison films with Sericol's TMI II screen printing ink system, contact Avery Dennison's Marking Films Customer Technical Support Team.
- To order Sericol's TMI II inks, MSDS (Material Safety Data Sheet) information, or to obtain general ink information, contact Sericol Customer Service at (800)-255-4562.

NOTE: The preceding information is based upon tests believed to be reliable and is intended only as a source of information. The purchaser should independently determine, prior to use, the suitability of the ink system for his/her specific purposes. Performance of the ink system is not guaranteed by Avery Dennison.

Revisions have been italicized.

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