

# Sericol TMI II Screen Inks: Four-Color Process

Instructional Bulletin #3.21 (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 all 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 Half-Tone Colors

Color	Color #
111 HT Yellow	K-86141
310 HT Magenta	K-86142
510 HT Blue	K-86143
710 HT Black	K-86144

### TMI II Half-Tone Toners

Color	Color #
HT Yellow Toner	K-84762
HT Magenta Toner	K-85819
HT Blue Toner	K-82423
HT Black Toner	K-81321
910 HT Base	K-87265

NOTE: Both the H.T. Toners and the H.T. Base are available if adjustments are necessary due to color separations, equipment, or alternate mesh size.

## 2.0 Thinning of TMI II Four Color Process Inks

- TMI II four-color process inks are supplied in the proper shade and balanced strength for screen printing through a properly tensioned 305 monofilament polyester mesh screen. Only the appropriate thinner needs to be added (see chart below). NOTE: Add solvents slowly to the ink, 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 the regular TMI II 960 thinner. Adjust with TMI II slow thinner or retarder if necessary to improve screen stability. The use of slow thinner or retarder will increase normal ink drying time. Jet dry and batch oven dry times will need to be extended.

## 3.0 Application of TMI Four Color Process Inks

Ink Type	Mesh Count	Squeegee Durometer
TMI II Four-Color Process	305	70

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

## Section 3 – Printing Information

### Instructional Bulletin

## 4.0 Drying of TMI II Four Color Process Inks

- The following chart gives the relative drying times based on the TMI II four-color process inks being thinned with the 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 four-color process inks 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. This total belt time is considered the minimum time required before stacking. For purposes of registration, the use of batch oven drying between four-color process colors is not recommended. TMI II four-color process inks do dry slower than other TMI inks. Therefore, racking between colors (off of the belt) may be necessary. Should subsequent registration become a problem due to slight shrinkage caused by the jet drying temperatures, rack air drying using high volume fans between four-color process colors for one(1) hour minimum may be substituted for jet drying. After jet drying the final TMI II four-color process 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 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 Graphics Customer Technical Support Team at.
- To order Sericol's TMI II inks, MSDS (Material Safety Data Sheet) information, or for 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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## Section 3 – Printing Information Instructional Bulletin

Page 2 of 2



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