RAYMARK A4 SHEET & RAYMARK 6 USER GUIDE

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Table of Contents

| Indicates Change

1. SCOPE

This User Guide provides basic information about Raymark labelstock. Raymark is a high performance, pressure sensitive label. It is designed primarily for printing using computer controlled sheet fed ink jet printers. Outstanding print permanence is achieved via a special epoxy surface that is heat cured (cross linked) after printing. This curing reaction tightly binds the print medium to a chemically stable surface giving an exceptionally rugged mark. A high performance pressure sensitive acrylic adhesive is provided on the back of the label stock. The epoxy surface and the adhesive are laminated to each side of a stabilised polyester film and a polyester liner protects the adhesive before use.

For recommended inkjet printers and inks for Raymark A4 sheet & Raymark 6 see TE document 411-121005 (Identification Printer Product Ribbon Matrix).

The recommended curing method for Raymark labelstock is five minutes in a pre-heated circulating hot air oven at 150℃.

2. QUALITY AND PERFORMANCE SPECIFICATION

TE Connectivity (TE) Quality Assurance Specification RW2518 establishes the quality standard for the Raymark A4 sheet and Raymark 6.

The quantitative performance of printed/finished labels depends on the printing technology, print medium and curing technique.

Users should independently assess the performance and suitability of Raymark labelstock if they wish to print and/or cure using methods other than those recommended by TE.

In addition, customers should independently verify performance of Raymark in applications where the application environment is significantly different to the test environments defined in RW2518.

3. PACKAGING

Raymark A4 sheet labelstock is supplied in a cardboard box measuring approximately 240 mm x 325 mm x 35 mm (9.5 inches x 12.8 inches x 1.4 inches).

The Raymark A4 sheet box contains 50 sheets of labelstock, packaged in air sealed foil bags. The weight of a box containing 50 sheets is 1.08 Kg (2.4 lbs.).

Raymark 6 is supplied as standard on a cardboard core in a continuous length of 40 metres (131.23 feet). These rolls are supplied inside air sealed foil bags.

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4. STORAGE AND SHELF LIFE

Raymark labelstock are shipped packed in moisture-resistant wrapping. The sealed foil bag and outer packaging have a “life” label indicating the product’s date of manufacture and Use-By date. Unopened boxes of labelstock must be stored at below 35℃.

Once opened the labelstock must be stored below 25°C (maximum 80% relative humidity) and used within six months of opening or when the use by date on the box is expired (whichever is the earlier). It is good practice to protect opened labelstock by repackaging partly used product inside the foil pouches after use.

Raymark labelstock must be cured within 8 hours of being printed, and installed within one year of being cured.

5. HANDLING

Raymark labelstock need no special handling precautions beyond normal good practice. The printable surface can be easily damaged prior to curing and should not be handled roughly.

The Raymark labelstock should be kept clean and free from dirt and fingerprints.

The Raymark labelstock should not come into contact with liquids, or epoxy curing agents such as amines that may cause premature curing of the product.

Care should be taken not to crease or fold the Raymark labelstock.

6. HEALTH AND SAFETY

Raymark labelstock contain precatalysed bisphenol-A epoxy resin which is classed as an irritant. Product safety data sheet is available from TE upon request. The Product safety data sheet gives further information on health and safety precautions that should be taken with Raymark A4 sheet & Raymark 6. In the United Kingdom the Product safety data sheet can be used to provide information for a COSHH assessment of the product.

Care should be taken to avoid an accumulation of epoxy dust in working areas.

Raymark product is flammable in its freestanding form, i.e., before installation.

7. PRINTING RAYMARK LABELSTOCK

Raymark Continuous & A4 sheet labels have been designed for printing by computer-controlled Ink-jet printers. For the current recommended inkjet printers for Raymark Continuous & A4 sheet see TE document 411-121005 (Identification Printer Product Ribbon Matrix).

Customers should determine suitable print quality settings they require for their particular application.

TE also provides two different label printing software packages:

- WinTotal
- PrintEasy

providing the Raymark labelstock standard templates, with support for graphics importation, sequential/non-sequential serial numbers, multi-colour, database importation, batch printing, etc.

Customers can choose their own software for printing providing it is compatible with the printer. TE does not supply a Raymark product template for third party software.

8. PRINTER LIMITATIONS

A gap of 1 mm between the in-tray adjustable product guide arm, and the edge of the Raymark sheet should be left when loading the sheet into the printer.

A quiet zone (un-printed) of 1 mm around the outer edge of each cut label is recommended when printing onto cut labels. This quiet zone will compensate for the print location variance.

9. CURING

The recommended curing method for Raymark product is five minutes in a pre-heated circulating hot air oven at 150℃.

Raymark labelstock can be heat cured with alternative equipment such as a temperature-controlled oven and users should again establish the suitability of equipment they wish to use.

If using a hot air oven, the following procedure should be adopted for curing the sheet labelstock.

9.1. Pre-requisite

The hot air oven should first be brought up to the correct operating temperature of 150℃ ± 5℃ [1] and the printed sheets should be printed and ready for curing.

Curing should be carried out in a well-ventilated or air extracted area.

9.2. Operation

On opening the oven door the sheets should be placed in the oven with the printed side up[2]. During curing the printed surface becomes tactile and may adhere to other surfaces; ensure the printed side of the sheets do not come into contact with:

- Other sheets being cured
- The oven shelving
- Sides of the oven

9.3. Curing Period

The 5 minute curing time for the Raymark labelstock should then commence once the oven door is closed

9.4. Raymark 6

Raymark 6 can be cured using the TMS-PERMATIZER unit.

The TMS-PERMATIZER transports the printed Raymark 6 roll under an infrared lamp. The infrared lamp heats the surface of the label stock and initiates the epoxy curing reaction. Post exposure to the infrared lamp the curing reaction proceeds at room temperature. After 24 hours the label will achieve its final print permanence.

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[1] Under no circumstances should Raymark labelstock be exposed to temperatures exceeding 200℃.
[2] Whenever possible Raymark labelstock should be placed within the oven promptly so as minimise heat loss.

TE document 411-121025 (formerly EIL/PIP/030) is available for the Permatizer giving operating instructions, safety information, electrical data, etc. Users should always be familiar with the contents of this document, particularly with regard to the electrical, thermal and optical safety issues. The Permatizer should only be used in a well-ventilated or air extracted area.

10. APPLICATION

The surface the label is to be attached to should be clean, free from dirt and grease; the surface can be cleaned by wiping with isopropyl alcohol (appropriate safety precautions should be taken when using this solvent). The surface should also be fairly smooth and free of sharp protrusions.

Apply finger or hand pressure via a cloth or roller to smooth the label onto the surface, working from one end of the label to the other to ensure maximum contact with the surface. Finger contact with the label's adhesive should be avoided.

The minimum installation temperature is 10℃ (for b oth flat panel and wraparound applications).

The adhesive has been designed to attain its full performance over a period of about 24 hours: this makes it relatively easy to remove labels shortly after application if they have been placed in error.

The minimum recommended substrate diameter is 6 mm with a minimum label-to-label overlap of 20mm (0.8 inches).

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