



# Piezo Ink Jet Ink Series 1500

## For VUTEk UltraVu™ Printers

### For Piezo Ink Jet Printing Only

### Product Description

3M™ Piezo Ink Jet Ink Series 1500 makes attractive four, six or eight color graphics. These solvent-based, pigmented inks, which are weather resistant and have excellent color retention, are designed and approved for use in the VUTEk UltraVu™ 150, 2360/3360 and 3300/5300 Printers.

### Applications and End Uses

Refer to the film product bulletin to determine the suitability of any particular film for your intended application.

### Product Line

This information is subject to change. Be sure this is the most current Product Bulletin. See 3M Related Literature at the end of this bulletin.

No.	Color	Stock No.
1581	Light Magenta	75-3470-5607-1
1582	Light Yellow	75-3470-5506-5
1585	Light Black	75-3470-5507-3
1586	Light Cyan	75-3470-5608-9
1591	Magenta	75-3470-5609-7
1592	Yellow	75-3470-5610-5
1595	Black	75-3470-5611-3
1596	Cyan	75-3470-5612-1

### Compatible Products

Note: For details on using a particular film or substrate for piezo ink jet printing, please refer to that product's Product Bulletin.

#### 100 Micron Films

- 3M™ Controltac™ Plus Graphic Film IJ160-10
- 3M™ Controltac™ Plus Graphic Film with Comply™ Performance IJ160C-10
- 3M™ Controltac™ Plus Graphic Film Series IJ162-10
- 3M™ Scotchcal™ Perforated Window Graphic Film IJ8173
- 3M™ Scotchcal™ Graphic Film IJ20-10
- 3M™ Scotchcal™ Graphic Film IJ20-20
- 3M™ Scotchcal™ Graphic Film IJ20-114
- 3M™ Scotchcal™ Graphic Film IJ40-10
- 3M™ Scotchcal™ Graphic Film IJ40-20

- 3M™ Scotchcal™ Graphic Film IJ40-114
- 3M™ Scotchcal™ Opaque Graphic Film 8645 ES

#### 50 Micron Films

- 3M™ Controltac™ Plus Graphic Film IJ180-10
- 3M™ Controltac™ Plus Graphic Film with Comply™ Performance IJ180C-10
- 3M™ Scotchcal™ Graphic Film Series 3650B, 3669
- 3M™ Scotchcal™ Translucent Graphic Film IJ3630-20

#### Reflective Films

- 3M™ Scotchlite™ Plus Flexible Reflective Graphic Film IJ680-10
- 3M™ Scotchlite™ Removable Graphic Film with Comply™ Performance Film IJ680CR-10

#### Banner Material

- 3M™ Single-Sided Banner Material 8451
- 3M™ Mesh Banner Material 8453
- 3M™ Panagraphics™ II Intermediate Flexible Substrate

## Overlaminates and Clear Coats

- 3M™ Screen Print Gloss Clear 1920DR
- 3M™ Scotchcal™ Lustre Overlamine 8934 ES
- 3M™ Scotchcal™ Matte Overlamine 8935 ES
- 3M™ Scotchcal™ Luster Overlamine 8936 ES
- 3M™ Scotchcal™ Lustre Overlamine 8937 ES
- 3M™ Scotchcal™ High Gloss Graffiti-Resistant Overlamine 8912 ES
- 3M™ Screen Print Gloss Clear 9720UV
- 3M™ Scotchcal™ Lustre Overlamine 3645
- 3M™ Scotchcal™ Lustre Overlamine 8519
- 3M™ Scotchcal™ Matte Overlamine 8520
- 3M™ Scotchcal™ Optically Clear Overlamine 8914i

## Warranty Information

### Graphic Performance Life

Only a Scotchprint® Graphics Authorized Manufacturer or 3M Piezo Ink Jet Registered Fabricator can produce 3M™ MCS™ Warranted Graphics.

For complete details on warranted constructions, please refer to the film's product bulletin. See 3M Related Literature, page 3, for information on how to obtain these bulletins.

### Warranty and Limited Remedy

*The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose:* 3M™ Piezo Ink Jet Ink Series 1500 is warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this Product Bulletin. 3M will replace or refund the price of any 3M materials that do not meet this warranty within the specified time periods. See the worldwide 3M™ MCS™ Warranty bulletin, which gives the terms and limitations of the warranty.

**These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor or non-3M materials charges.**

## Printing

To get the durability given in the Graphic Performance Life, follow the guidelines and procedures in Instruction Bulletin 4.45 for printing with piezo ink jet ink series 1500.

Note: It is very important to read and follow ALL instructions to achieve the best image quality.

Be sure the operator reads and follows "Understanding Printing with Solvent-Based Piezo Ink Jet Inks," also in Instruction Bulletin 4.45. An operator who understands pre-press operations and the relationship between film characteristics, printer setup, total ink coverage and drying

time can produce graphics that achieve the performance expectations of the film and the customer. The operator should also work with the graphic designer and/or color conversion operator so there is a common understanding of print and media parameters.

### Total Ink Coverage

Do not exceed the total ink coverage recommended for the film (see the film's Product Bulletin or Instruction Bulletin 4.45). Too high a total physical ink amount on the film results in media characteristic changes, inadequate drying, overlamine lifting, and/or poor graphic performance.

## Drying



### Caution

Always build enough time into your process to ensure adequate drying of the graphic. Poorly dried film may become soft and stretchy, and the adhesive properties may be affected. This can cause difficulty when applying an overlamine, rolling the graphic, and applying the film. See the ink's Instruction Bulletin for more details.

## About Scotchlite Reflective Graphic Film

Ink series 1500 can be used with approved Scotchlite films; however, ink series 1500 is semi-transparent and may reduce the retroreflectivity of the film.

Close color matching of multi-sheet graphics is difficult on retroreflective materials because production lots may vary. Adjoining panels of reflective graphic film must be checked for both daytime and nighttime appearance.

## Printer Cleaning and Maintenance

Printer cleanliness is very important in the production of high quality, full color graphics. You must follow the routine maintenance schedule in the VUTEK UltraVu User's Guide, including the periodic changing of in-line filters.

We recommend that each customer assign a master operator that will have maintenance responsibilities. This person will be trained by a technician during printer installation and must use the recommended methods and safety measures.

You will need a thinner/cleaner that is compatible with the ink in the printer for performing normal printer maintenance.

## Shelf Life, Storage and Shipping

- Store piezo inks in their original packaging.
- Store the inks at 0° to 32°C (32° to 90°F).
- Use the ink within one year of purchase.
- Ink series 1500 may be regulated for shipping. In the United States, the inks are not regulated for ground shipment. They are, however, regulated for air shipments and should not be shipped by air without proper documentation. Opened ink bottles (foil seal broken) no longer meet UN packaging guidelines and cannot be shipped by air without special UN-approved overpacking containers.

## Health and Safety

### Ventilation

Provide local and/or general exhaust ventilation in the printing drying areas to prevent a build up of solvent vapors and to maintain levels of solvents below the limit for worker exposure. An experienced industrial ventilation engineer and/or a certified industrial hygienist can help evaluate your ventilation requirements and design based on your site process conditions. VUTEK, the printer's manufacturer, also provides ventilation information. Please refer to their literature too.

Note: Additional environmental, health and safety information is available in EHS Bulletin 1500, which is available on our web site at [www.scotchprint.com](http://www.scotchprint.com). See page 1 for how to access the site.

## 3M Related Literature

Before starting any job, be sure you have the most recent product and instruction bulletins.

Subject	Bulletin No.
<b>Product Bulletins</b>	
3M™ Controltac™ Plus Film IJ160-10	IJ160-10
3M™ Controltac™ Plus Graphic Film with Comply™ Performance IJ160-10	IJ160C-10
3M™ Controltac™ Plus Film Series IJ162-10/114	IJ162
3M™ Controltac™ Plus Graphic Film IJ180-10	IJ180-10
3M™ Controltac™ Plus Graphic Film with Comply™ Performance IJ180C-10	IJ180C-10
3M™ Scotchlite™ Plus Flexible Reflective Graphic Film IJ680-10	IJ680-10
3M™ Scotchlite™ Removable Graphic Film with Comply™ Performance IJ680CR-10	IJ680CR-10
3M™ Scotchcal™ Graphic Film 3650B, 3669	3650B, 3669
3M™ Scotchcal™ Translucent Film IJ3630-20	IJ3630-20
3M™ Scotchcal™ Perforated Window Graphic Film IJ 8173	IJ8173
3M™ Single-Sided Banner Material 8451	8451
3M™ Mesh Banner Material 8453	8453
3M™ Panagraphics™ II Intermediate Flexible Substrate	Panagraphics
3M™ Scotchcal™ Lustre Overlamine 3645	3645
3M™ Scotchcal™ Overlamine 8519 and 8520	8519/8520
3M™ Scotchcal™ Optically Clear Overlamine 8914i	8914
3M™ Screen Printing Ink Series 1900	1900
3M™ Screen Printing Ink Series 9700UV	9700
3M™ Scotchcal™ Graphic Film IJ20-10, IJ20-20, IJ20-114	20
3M™ Scotchcal™ Graphic Film IJ40-10, IJ40-20, IJ40-114	40
3M™ Scotchcal™ Opaque Graphic Film 8645 ES	8645
3M™ Scotchcal™ Luster Overlamine 8934 ES/3M™ Scotchcal™ Matte Overlamine 8935 ES	8935
3M™ Scotchcal™ Luster Overlamine 8936 ES/ 3M™ Scotchcal™ Matte Overlamine 8937 ES	8937
3M™ Scotchcal™ High Gloss Graffiti-Resistant Overlamine 8912 ES	8912
<b>Instruction Bulletins</b>	
Design of graphics	2.1
Printing with piezo ink jet ink series 1500	4.45

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## Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

## Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

## Technical Assistance

For help on specific questions relating to 3M Commercial Graphics Division Products, contact your local Technical Service Representative.

Commercial Graphics Department  
3M United Kingdom PLC  
3M Centre, Cain Road, Bracknell  
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Tel: 01344 857850  
Fax: 01344 857939  
e-mail: [commgraphics.uk@mmm.com](mailto:commgraphics.uk@mmm.com)  
[www.3m.com/uk/graphicsolutions](http://www.3m.com/uk/graphicsolutions)  
[www.scotchprint.com/uk](http://www.scotchprint.com/uk)

## Sales Assistance

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