

Transportation Safety Division

# 3M™ Piezo Inkjet Series 8900UV Ink

Product Bulletin Series 8900UV November 2020

Replaces PB 8900UV Dated August 2020

## 1 Description

3M™ Piezo Inkjet Series 8900UV Ink is designed as part of 3M's system of matched components for application with Durst 163TS and EFI H1625-RS Wide Format Inkjet Printers onto 3M™ Advanced Flexible Engineer Grade Reflective Sheeting Series 7300, 3M™ High Intensity Prismatic Digital Sheeting Series 3930DS, and 3M™ Diamond Grade™ DG<sup>3</sup> Prismatic Digital Sheeting Series 4000DS. These UV curable inks are durable, transparent, weather-resistant, and have excellent color retention when used in combination with the appropriate recommended 3M system of matched components.

The ink is available in the following colors.

Table 1. Product codes by color for EFI and Durst printers.

Ink Color	EFI H1625-RS Product Code	Durst 163TS Product Code
Blue	8903UV v2	8953UV v2
Black	8905UV	8955UV
Red	8922UV	8972UV
Yellow	8924UV	8964UV
Magenta	8915UV	8965UV
Cyan	8916UV	8966UV

## 2 ASTM Compliance

When 3M recommended settings are used, traffic colors yellow, red, blue, green, and brown printed with 3M Piezo Inkjet Series 8900UV Inks onto 3M™ Advanced Flexible Engineer Grade Reflective Sheeting Series 7300 and laminated with 1170 clear overlamine, are expected to meet the daytime color, nighttime color, and daytime luminance factor requirements stated in ASTM D4956, Tables 11, 13, and 2, respectively, and have not less than 70% of the coefficients of retroreflection ( $R_A$ ) stated in ASTM D4956 Table 1 (Type I).

When 3M recommended settings are used, traffic colors yellow, red, blue, green, brown, purple, and orange, printed with 3M Piezo Inkjet Series 8900UV Inks onto 3M High Intensity Prismatic Digital Sheeting 3930DS and laminated with 1170 clear overlamine, are expected to meet the daytime color, nighttime color, and daytime luminance factor requirements stated in ASTM D4956, Tables 11, 13, and 2, respectively, and have not less than 70% of the coefficients of retroreflection ( $R_A$ ) stated in ASTM D4956 Table 5 (Type IV).

When 3M recommended settings are used, traffic colors yellow, red, blue, green, brown, purple, and orange, printed with Piezo Inkjet Series 8900UV Inks onto 3M Diamond Grade DG<sup>3</sup> Prismatic Digital Sheeting 4090DS and laminated with 1170 clear overlamine, are expected to meet the daytime color, nighttime color, and daytime luminance factor requirements stated in ASTM D4956, Tables 11, 13, and 2, respectively, and have not less than 70% of the  $R_A$  values stated in ASTM D4956 Table 10 (Type XI).

When 3M recommended settings are used, black, printed on 3M™ Advanced Flexible Engineer Grade Reflective Sheeting Series 7300, 3M High Intensity Prismatic Digital Sheeting Series 3930DS, or 3M Diamond Grade DG<sup>3</sup> Prismatic Digital Sheeting Series 4000DS and laminated with 1170 clear overlamine, will appear opaque.

## 3 Durability

3M reflective sheeting durability depends upon substrate selection and preparation, compliance with recommended application procedures, geographic area, exposure conditions, and maintenance. Maximum durabilities can be expected in applications subject to vertical exposures on stationary objects when processed and applied to properly prepared aluminum according to 3M recommendations provided in [Information Folder 1.7](#). The user must determine the suitability of any nonmetallic sign backing for its intended use. Applications to unprimed, excessively rough, or non-weather-resistant surfaces and exposure to severe or unusual conditions can shorten the lifetime of 3M sheeting. Signs in mountainous areas that are covered by snow for prolonged periods may also have reduced durabilities. Atmospheric conditions in certain geographic areas may result in reduced durability.

**Important Notice:** This product bulletin provides technical information only. The user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection herewith.

## 4 Disclaimer

With the exception of 3M branded products, 3M does not represent that any printer or printer accessory recommended in 3M literature will meet customer requirements, any federal, state, or local regulations, or any applicable safety standards. Such determination is the responsibility of the printer owner. For a buyer's convenience, 3M may provide engineering or technical information, recommendations, certifications, and other information or materials relating to other company's products ("Other Information"), but 3M does not warrant Other Information, including but not limited to its accuracy or completeness.

## 5 Printing Guidelines

Please follow the recommendations below for best results.

### 5.1 Selecting, Preparing & Using 3M Retroreflective Sheeting

Do not use damaged rolls of sheeting, as this can result in head strikes and printer damage. Condition the sheeting, ink and overlaminate for at least 24 hours in the same environment as the printer before using.

### 5.2 Printing Recommendations for Traffic Signage

Printer set-up is critical to achieving good image quality and ensuring proper sheeting processing. Please follow the printer setting recommendations provided by the printer manufacturer during printer installation, as they are required as part of 3M's system of matched components for the production of traffic signs.

### 5.3 Operation and Maintenance Procedures

Printer maintenance is very important in the production of high quality signs and graphics. Follow all operation and maintenance procedures recommended in the printer's user manual.

### 5.4 Application of Overlamine

To avoid silvering artifacts (trapped air between the ink layer and overlamine), the lamination process should be conducted using a laminator that meets the following performance considerations:

- 1 Roll to roll laminator
- 2 Minimum 48" wide, Maximum 65" wide
- 3 Top nip roll heated to 150 °F
- 4 Prefer pneumatically controlled nip
- 5 Rubber covered nip rolls capable of a minimum nip pressure of 7 pounds per lineal inch
- 6 Speed variable from 0-10 feet per minute
- 7 One unwind shaft for printed sheeting
- 8 One unwind shaft for overlamine
- 9 One rewind shaft for finished product
- 10 One rewind shaft for overlamine liner

## 6 Shelf Life and Storage

Use inks within one year of date of manufacture. Leave the ink in the original packaging during both storage and use to prevent exposure to light. Light can cause the UV ink to cure prematurely and damage the printer. Store at temperatures between 32 and 80 °F.

## 7 Environmental, Health, and Safety

Read all health hazard, precautionary, and first aid statements found in the safety data sheet (SDS), article information sheet, and/or product label of chemicals prior to handling or use. Consult local regulations and authorities for possible restrictions. Visit us at [www.3M.com/US](http://www.3M.com/US) and select SDS Search to obtain current safety data sheets, contact 3M by mail, or, for urgent requests, call 1-800-364-3577.

When using any equipment, always follow the manufacturers' instructions for safe operation.

## 8 Warranty Information

### 8.1 3M Basic Product Warranty

3M Piezo Inkjet Series 8900UV Ink (“Product”) is warranted (“Basic Warranty”) to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this product bulletin. If the Product is proven not to have met the Basic Warranty on its shipment date, then a buyer's exclusive remedy, and 3M's sole obligation, at 3M's option, will be refund or replacement of the Product.

### 8.2 3M MCS™ Warranty, MCS Warranty for Traffic, and Limited Remedy

For the MCS Warranty, MCS Warranty for Traffic, and limited remedies applicable to the Product, refer to the 3M Digitally-Imaged Sign Warranty Bulletin.

### 8.3 Warranty Disclaimer

THE 3M WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM, OR USAGE OF TRADE.

### 8.4 Limitation of Liability

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## 9 Other Product Information

Always confirm that you have the most current version of the applicable product bulletin, information folder, or other product information from 3M's Website at <http://www.3M.com/roadsafety>.

## 10 Literature References

<a href="#">3M IF 1.7</a>	Sign Base Surface Preparation
<a href="#">3M IF 1.11</a>	Sign Maintenance Management
<a href="#">3M IF 1.19</a>	Digital Imaging with Durst 163TS Printers on 3M™ Reflective Sheeting
<a href="#">3M IF 1.20</a>	Digital Imaging with EFI H1625 RS Printer on 3M™ Reflective Sheeting
<a href="#">3M PB 1170</a>	3M™ ElectroCut™ Film Series 1170
<a href="#">3M PB 7300</a>	3M™ Advanced Flexible Engineer Grade Reflective Sheeting Series 7300
<a href="#">3M PB 3930DS</a>	3M™ High Intensity Prismatic Reflective Digital Sheeting Series 3930DS
<a href="#">3M PB 4000DS</a>	3M™ Diamond Grade™ DG <sup>3</sup> Prismatic Reflective Digital Sheeting Series 4000DS

ASTM Test Methods are available from ASTM International, West Conshohocken, PA.

## For Information or Assistance

Call: 1-800-553-1380 In

Canada Call:

1-800-3M HELPS (1-800-364-3577)

Internet: <http://www.3M.com/roadsafety>

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