Reflective Ink for Textiles Series 8000
8010 Grey
8011 Silver
8015 White

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1. Product Description

The information in the Product Bulletin refers to all above mentioned products.

3M™ Reflective Ink for Textiles - Series 8000 is a screen printable ink intended for the application on absorbent fabrics in order to create bright, fashionable reflective images. The product provides a fashionable visual effect, when illuminated by vehicle headlights.

2. Product Features

Product Design

Reflective Ink for Textiles Series 8000:

- Is a waterbased screen printing ink with
  - Part A being the waterbased ink
  - Part B being the reflective element
  - Part C being the coupling agent. This Part is also packaged in the Part B container together with an eye-dropper for dispensing.

2.2 Special Features

Reflective Ink for Textiles Series 8000:

- Offers a typical brightness range of 10 – 30 cd/lx/m². Brightness depends on colour.
- Provides a matt finish.

To ensure consistency of performance, reflective inks are manufactured within an ISO 9002 controlled manufacturing environment.
3. General Safety Information

Read 3M™ Reflective Ink for Textiles - Series 8000 Product Bulletin carefully.

The wearer is ultimately responsible for his/her own safety.

- Reflective Ink for Textiles Series 8000 is intended to be used for fashionable reflective images on recreational garments. The print is visible at daytime as a normal printed image and provides a fashionable visual effect in low light conditions when illuminated with a directional light source.

- Field test the finished garment to verify its suitability for intended use and to select appropriate care conditions.

- Reflective Ink for Textiles Series 8000 has been designed for fashion applications and will not provide visual protection.

- The printed reflective images will not provide the high visibility required for typical traffic environments in low light conditions.

4. Product Application

Reflective Ink for Textiles Series 8000 is recommended for garments or accessories, not suffering from harsh wear impact and being subjected to domestic wash care procedures.

5. Printing

5.1 Substrate

Reflective Ink for Textiles Series 8000 is recommended for screen printing on 100 % cotton, cotton blends or other absorbent fabrics.

- Substrates absorbency is the key for achieving a good durability. Printing on non-absorbent fabrics will result in a poor wash durability and low abrasion resistance.

- Sizing agents, coning oils or water repellent treatments decrease wash durability and abrasion resistance of the finished product. Fabric finishes or treatments should be removed prior to printing with a common washing / bleaching procedure.

- The colour and adhesion of the print may vary with the actual substrate being used.

- The appearance of colours are influenced by substrate colour, weave/surface texture and the ink coverage.

- The adhesion to the substrate may be affected by repeated machine laundering.

- Water repellent treatments may be applied after the printing.

- User should determine the durability of the finished product prior to the production run.

5.2 Ink Mixing Instructions

- Use a polyethylene, stainless steel or glass container for mixing.

- The ratio for mixing is 65:34:1 (A:B:C) by weight. A complete kit provides exactly this ratio.

- Weigh out appropriate amounts of Parts A and B, and use the eye dropper to add Part C.

- Mixed ink should be used within 24 hours or must be discarded.

- All containers should be covered and sealed when not in use.

- Mix only amount for immediate screening.
Mix complete amounts of the 3 components thoroughly before using.

Part A is ready for printing without thinning. Use of drying retardents may affect the durability of the print and is not recommended.

### 5.3 Application Process for Flat Bed Screen Printing

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<thead>
<tr>
<th>Mesh Count</th>
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<tbody>
<tr>
<td>Squeegee</td>
<td>Medium (65 A – 75 A shore)</td>
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<tr>
<td>Stencil</td>
<td>Stencil material for water-based inks</td>
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- Use off-contact set-up (10 – 12 mm).
- Use a light fill pass for each impression.
- Refill the screen with ink after each impression.
- Keep screen filled during any delays to prevent ink drying in the screen. **If a lengthy delay is unavoidable, the screen should be cleaned with water.**
- Best reflective brilliance is obtained with a single pass. A coarser screen should be used if more than one pass is required for coverage.
- Intermediate drying for each colour.
- Keep ink temperature below 35°C to extend the pot life of ready mixed ink.

### 5.4 Drying and Curing

For maximum durability the screened image must be force dried for a minimum of 2 minutes at 170°C. The drying time may be cumulative within a 24 hour period.

### 5.5 Screen Cleaning

The resin portion of this ink is a water-based latex. **Timely clean-up this essential to screen preservation.** Wash screens with water immediately after use or when sequential screening will be interrupted for a period of 5 minutes or more. Failure to promptly clean the screen may allow the ink to permanently dry into the screen.

### 5.6 Ink Consumption

3M™ Reflective Ink for Textiles Series 8000 coverage is approximately 23 m² per 3.8 liters (= 4.6 kg). The coverage varies with substrate and ink colour.

### 5.7 Rotary Screen Printing

Reflective Ink for Textiles Series 8000 is also suitable for rotary screen printing.

### 5.8 Caution

Reflective Ink for Textiles Series 8000 is designed to be screen printed on absorbent fabric surfaces. Deviation from the converting conditions recommended below could diminish the brilliance, abrasion resistance and wash durability of the images and shorten the product’s lifetime significantly. The following instructions therefore must be strictly followed:

- Protect water-based screen printing ink from freezing!
- No printing on water repellent textiles substrates.
- No deviation from the mixing ratio of components A, B and C.
No drying / curing below 170°C and a minimum of 2 minutes.

6. Handling and Storage

6.1 Product Storage

- Store each component in original container with air tight lid at temperatures between 4°C and 32°C. Containers must be protected from freezing to maintain product performance.
- Use by expiration date on Part A label. Shelf life is valid until container is open.

7. Product Maintenance

Reflective materials naturally age. Ageing depends upon material type, conditions of use, environment and maintenance procedures.

The retroreflective performance of all reflective materials is affected by soiling. Any kind of dirt, liquid chemicals, grease and alike will reduce brightness in the area of contamination.

7.1 Product Cleaning

Before usage, the user shall determine the suitability of the intended care process for 3M™ Reflective Ink for Tex tiles Series 8000. A test application of the finished garment should be conducted to determine the maximum number of care cycles expected for each application.

For cleaning see Reflective Ink for Textiles Series 8000 Care Guideline. For consultation on care, contact your local 3M representative.

Caution:
The use of stain removers is not recommended.

7.2 Maintenance Misuse

Reflective Ink for Textiles Series 8000 is an optical system. Coating of the product with material of high refractive index, such as oil, will diminish reflective performance.

- No harsh mechanical treatment, e.g. abrasion with wire brushes or sand paper.
- No uniform coating or spraying of oils, protective waxes, inks or paint.
- No application of materials such as leather spray or shoe shine.

7.3 Product Disposal

Product can be recycled attached to the garment or accessory. The garment can be incinerated in a commercial or industrial facility or disposed in a sanitary landfill. Before recycling, the compatibility shall be determined with the intended recycling process.

8. Specific Safety Information

Before using this product, please read the current Material Safety Data Sheet and follow all applicable directions.

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Before using/converting, the user/_converter must determine the suitability of the product for its intended use/converting, and the user/_converter assumes all risk and liability whatsoever in connection therewith. All questions of warranty and liability relating to this product are governed by the terms of the sale subject where applicable to the prevailing law. No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of us.

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