DURABrite Ultra pigment ink is the latest formulation in the DURABrite Ink family and is currently featured in the Epson Stylus® C88 printer and the Epson Stylus CX3800 Series/CX4200/CX4800/CX5800F/CX7800 all-in-one printers. These products are designed for the consumer and SOHO (Small Office/Home Office) customer who is looking for versatility, productivity, ease of use, image quality on plain and photo paper, and image durability. This technical brief will focus on the following key advantages of the 4-color, pigment-based DURABrite Ultra pigment ink:

- Enhanced support for glossy papers
- Ideal for printing everyday documents
- Durable output
- Wide media support
- Convenient individual ink cartridges

### Advantages of DURABrite Ultra Pigment Ink—Enhanced Support for Glossy Papers

Many consumers are looking for a printer that can produce great everyday text documents and photos; with the new DURABrite Ultra pigment ink, customers get high quality glossy photos without compromising the text and graphic printing quality on plain paper that DURABrite Ink has been known for. DURABrite Ultra pigment ink offers these new advantages when printing photos on glossy papers:

1. **Better glossiness:** Where previous formulations of DURABrite Ink were optimized mostly for plain and matte papers and produced good quality photos on glossy papers, the DURABrite Ultra pigment ink now produces extremely good output on even the best Epson glossy photo papers:
   - Epson Ultra Premium Glossy Photo Paper—This "best of breed" glossy photo paper has a heavier, professional weight with a smooth, high-gloss finish.
   - Epson Premium Glossy Photo Paper—This high-gloss paper makes prints look and feel like a traditional photograph.
   - Epson Premium Semigloss Photo Paper—This media has the look and feel of true photographic paper, and is ideal for printing displays or scenic color images. The semigloss finish delivers beautiful results.
   - Epson Premium Luster Photo Paper—This paper with Luster E surface finish produces vivid, lifelike images that rival those of traditional silver halide prints, with high saturation and high D-Max for true photographic reproductions. It is compatible with the DURABrite Ultra pigment ink when using the Premium Semigloss Photo Paper driver setting.
   - Epson Glossy Photo Paper—This glossy photo paper delivers a smooth, glossy finish for everyday photos.

2. **Reduced gloss differential:** Gloss differential occurs when the gloss of the paper is different from the gloss of the ink. By using a new resin formulation, gloss differential with the DURABrite Ultra pigment ink is reduced and the color gamut is improved.

3. **Reduced metamerism:** Metamerism is an effect where colors appear to be different under dissimilar lighting conditions (such as natural light and fluorescent light). With the new ink formulation, metamerism is reduced.

DURABrite Ultra pigment ink has the flexibility to produce high quality glossy photos as well as superb photos on matte papers. Epson printers and all-in-one printers with DURABrite Ultra pigment ink all support BorderFree® printing, too, so your customers can print borderless, frame-ready photos right out of the printer—without trimming or perforations.
Advantages of DURABrite Ultra Pigment Ink—Ideal for Printing Everyday Documents

DURABrite Ultra pigment ink uses an exclusive Microencapsulation technology where each pigment particle is encased in a resin. A unique polymer pulls the particles apart so they are suspended in the solution and never coagulate. The ink base then helps the DURABrite Ultra pigment ink pigment particles penetrate into the paper.

Using this technology, DURABrite Ultra pigment ink offers these printing advantages:

1. **Extra-sharp text and graphics on plain paper**: Because conventional dye-based ink acts much like a watercolor paint, its molecules are absorbed into plain paper. The spreading of ink into plain paper's fibers is referred to as feathering.

   DURABrite Ultra pigment ink pigment particles “rest” near the surface of the paper and are not absorbed into the fibers like conventional dye inks. DURABrite Ultra pigment ink produces a much smaller spot size than dye-based ink, resulting in sharper output on plain paper. This applies to both text and graphics.

2. **Double-Sided prints without bleed-through**: DURABrite Ultra pigment ink uses a special technology that controls the penetration level of the ink and keeps the colorant near the surface. Additionally, output on plain and matte papers is optimized with a higher optical density, which means your customers will get darker blacks.

3. **Brighter colors**: DURABrite Ultra pigment ink uses an innovative formulation of color inks, producing brighter output on plain, matte, and glossy paper.

With these advantages, DURABrite Ultra pigment ink is an ideal solution for consumers who generally print everyday documents. Customers can achieve outstanding output, even on plain paper, when printing greeting cards, reports, labels, web pages, resumes, menus, and more.

With the added improvements for printing on glossy papers, the DURABrite Ultra pigment ink is the ideal solution for customers who want one printer to produce everyday documents and photos: it combines the best of both in one ink set.

DURABrite Ultra pigment ink offers what consumers are looking for most:
Advantages of DURABrite Ultra Pigment Ink—Durable Output

DURABrite Ultra pigment ink offers smudge-, fade-, and water-resistant output on all supported papers, including plain paper.

1. **Smudge-Resistant Prints**: Many competitor's dye-based inks are not smudge-resistant, especially immediately after printing, and most prints need several minutes of drying time before they can be touched.

   All Epson ink solutions, including the DURABrite Ultra pigment ink, use a quick drying formula. Epson prints can be touched, without fear of causing smudges, right after printing and beyond. Customers can handle prints without fear of damaging them.

2. **Fade-Resistant Prints**: DURABrite Ultra pigment ink has fade-resistant properties that exceed those of photo lab prints and won't fade as quickly as many competitor's prints—even on plain paper. With DURABrite Ultra pigment ink, cherished photos and important documents will last for generations.

   Testing for DURABrite Ultra pigment ink is currently being finalized by Wilhelm Imaging Research, Inc, a leading authority on print permanence. Initial results indicate it has comparable light resistance to DURABrite Ink—up to 100 years when used with Epson Matte Paper Heavyweight.*

   * Lightfastness rating based on accelerated testing of prints on specialty media, displayed indoors and under glass. Actual print stability will vary according to image, display conditions, light intensity, humidity, and atmospheric conditions. Epson does not guarantee longevity of prints. For maximum print life, display all prints under glass or UV filter or lamination, or properly store them. For full details on test reports, visit http://www.wilhelm-research.com.

3. **Water-Resistant Prints**: Dye-based inks are molecules dissolved in water. These molecules are then absorbed into the paper. If the paper were to get wet, the dye molecules will again dissolve and move from their original position, causing smearing. Pigment inks, such as the DURABrite Ultra pigment ink, are comprised of pigment particles suspended in the ink, and once applied to paper do not dissolve if they get wet, and do not smear.

   The water-resistant properties of DURABrite Ultra pigment ink prevent accidental damage caused by moisture and spills. Many competitive printers use a water-resistant pigment black, but dye-based color inks. DURABrite Ultra pigment ink uses pigment-based black and color inks, and offers water-resistant properties on all supported papers, including plain paper.
Advantages of DURABrite Ultra Pigment Ink—Wide Media Selection

DURABrite Ultra pigment ink is optimized for plain and matte papers, yet also produces excellent results on glossy papers. The ink set is compatible with the following media:

<table>
<thead>
<tr>
<th>Plain Papers</th>
<th>Matte Surface Papers</th>
<th>Glossy Surface Papers</th>
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<tbody>
<tr>
<td>• Epson Premium Bright White Paper</td>
<td>• Epson Enhanced Matte Paper</td>
<td>• Epson Ultra Premium Glossy Photo Paper</td>
</tr>
<tr>
<td>• Other plain paper</td>
<td>• Epson Matte Paper Heavyweight</td>
<td>• Epson Premium Glossy Photo Paper</td>
</tr>
<tr>
<td></td>
<td>• Epson Double-Sided Matte Paper</td>
<td>• Epson Premium Semigloss Photo Paper</td>
</tr>
<tr>
<td></td>
<td>• Epson Photo Quality Ink Jet Paper</td>
<td>• Epson Premium Luster Photo Paper</td>
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<td></td>
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<td>(using the Premium Semigloss Photo Paper driver setting)</td>
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<tr>
<td></td>
<td></td>
<td>• Epson Glossy Photo Paper</td>
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</tbody>
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Advantages of DURABrite Ultra Pigment Ink—Convenient Individual Ink Cartridges

DURABrite Ultra pigment ink was designed for the consumer and small office/home office (SOHO) customer. This customer generally prints text documents, web pages, homework/reports, labels, and maybe craft projects, yet also may own a digital camera and wants to print high quality photos.

DURABrite Ultra pigment ink offers convenience to this customer by offering:

- Individual ink cartridges—With individual ink cartridges, customers can take control of ink usage, replacing only the ink that runs out. Unlike other manufacturers who feature individual ink cartridges in only top-of-the-line models, Epson offers individual DURABrite Ultra pigment inks in printers and all-in-one printers ranging in price from $79 to $179.
- Excellent output on plain papers—Because you don't have to use specialty papers to obtain the best print quality for text documents, DURABrite Ultra pigment ink offers added convenience.
- New DURABrite Ultra Bundle Packs—New bundle packs will include color inks and 4x6 borderless photo paper, making it easy for customers to print snapshots at home.
Comparison of DURABrite Ultra Pigment Ink and Dye-Based Ink

DURABrite Ultra is the only consumer-class 4-color ink set that uses all pigment-based ink; some competitive printers use pigment-based black with dye-based color, and others use all dye-based ink. The key advantage of Epson DURABrite Ultra pigment ink is its ability to produce the highest quality text and photos, offering color qualities similar to dye-based ink with the durability qualities of pigment ink. The key differences between conventional dye ink and DURABrite Ultra pigment ink are:

<table>
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<tr>
<th>Key Differences</th>
<th>Conventional Dye Ink</th>
<th>DURABrite Ultra Pigment Ink</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
<td>Formed from color-forming, water-soluble molecules</td>
<td>Comprised of insoluble pigment particles</td>
</tr>
<tr>
<td>Color Gamut</td>
<td>Best</td>
<td>Excellent on Plain and Matte Papers; Very Good on glossy photo papers</td>
</tr>
<tr>
<td>Fade-resistance</td>
<td>Fair to Good The dye inks are dependent on special paper to resist fading.</td>
<td>Excellent DURABrite Ultra pigment ink has fade resistance beyond photo lab prints—up to 100 years (see page 3)</td>
</tr>
<tr>
<td>Water-Resistance</td>
<td>Good Inks are water-resistant on many glossy photo papers but not on matte papers.</td>
<td>Excellent Inks are water-resistant on all supported media, including plain paper.</td>
</tr>
<tr>
<td>Plain Paper Printing</td>
<td>Good Feathering occurs as ink is absorbed into the plain paper fibers.</td>
<td>Excellent Sharp, clear text and graphics without bleeding.</td>
</tr>
<tr>
<td>Media Selection</td>
<td>Best Widest media compatibility of any ink set: Plain, Matte, RC (Resin Coated) Photo and High Gloss papers, and specialty media (including photo stickers and iron-on transfers)</td>
<td>Excellent Wide media selection: Plain, matte, and glossy papers</td>
</tr>
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</table>

Epson also offers a dye-based ink set using 6-color Epson Photo Ink. This ink set is included in printers and all-in-one printers designed for photo enthusiasts. For this customer, the increased gradation level with the additional light intensity inks is critical, as this customer's primary focus is printing photographs from snapshot size to 8x10s. The comparison of the two ink systems can be summarized according to the chart at right.
Summary

DURABrite Ultra pigment ink provides the best combination of features to the consumer/SOHO customer:

- Versatility and flexibility (with the ability to print exceptional text documents and photos)
- Image quality on plain and photo paper
- Image durability (smudge, fade, and water-resistance)

DURABrite Ultra pigment ink offers:

- Improved printing on glossy paper, with better glossiness and wider support for more glossy photo papers, even the top-of-the-line glossy papers
- Excellent output for everyday text documents, especially on plain paper
- Smudge-, fade-, and water-resistance, even on plain paper
- Wide media support, including plain, matte, and even top-of-the-line glossy papers
- Convenient individual ink cartridges

DURABrite Ultra pigment ink is the ideal solution for printing reports, web pages, greeting cards, presentations, report covers, resumes, menus, and photos—now with improved printing on glossy papers.

For complete details on how DURABrite Inks compare to other Epson ink technologies, refer to the Epson Ink Solutions document.

DURABrite Ultra pigment ink is currently featured on the following Epson stand-alone printers and all-in-one printers:

- Epson Stylus C88
- Epson Stylus CX3800 Series
- Epson Stylus CX4200
- Epson Stylus CX4800
- Epson Stylus CX5800F
- Epson Stylus CX7800

Visit www.DURABrite.com for the latest information on DURABrite Ultra pigment ink, testimonials, and more.

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