

Optilux™ Ultra Reflective Ink Systems



Optilux™ 505 Ultra Reflective Plastisol is an easy to print, two-part, retro-reflective ink that contains light-reflecting microspheres. When a garment printed with **Optilux™ 505** ink is exposed to a focused beam of light, such as that from a flashlight or an automobile headlight, it reflects or returns light back to the light source.

Optilux™ 505 Ultra Reflective Plastisol can be used as a unique decorative tool to increase nighttime visibility of a printed design

Optilux™ Application

To obtain the best reflective properties, **Optilux™ 505** is recommended for use on open weaved fabrics. **Optilux™** can also be used with very good to excellent results on some tightly woven nylon and polyester fabrics. **Optilux™ 505** is not a low bleed product and is not recommended for use on bleeding fabrics.

Nylon and Polyester Fabrics

Print **Optilux™ 505** ink through a 160 t/in to 230 t/in (63 t/cm to 90 t/cm) Monofilament screen. Use one flood stroke and one print stroke for best results. Two print strokes can be used for added opacity when printing through a 230-mesh t/in (90 t/cm).

On tightly woven fabrics such as shell nylon, a flash cured underbase print of International Coatings' 900 or 9000 Series nylon inks may be used to gain opacity, color and a smoother looking print. Printing **Optilux™ 505** over an underbase may diminish the reflective strength of the ink to a small degree but for some nylon or polyester fabrics, it is best to print over an underbase in order to obtain the cleanest print of the **Optilux™ 505** ink. Printing **Optilux™ 505** ink onto some tightly woven nylon or polyester materials without an underbase may leave the print looking pockmarked as the ink may not flow properly on some of these fabrics.

Always test for adhesion when printing onto any tightly woven material such as shell nylon. Water resistant or waterproof coatings on some nylon or polyester fabric may prevent proper adhesion of **Optilux™ 505**.

On some polyester materials, bleeding or dye migration may occur. These types of fabric should be tested prior to beginning any production of finished product. Bleeding or dye migration might not occur immediately, so longer term testing of the ink film is strongly recommended when printing polyester or polyester blend fabrics.

Cotton and Cotton/Poly Blends Fabrics

Print **Optilux™ 505** ink through a 160 t/in to 230 t/in (63 t/cm to 90 t/cm) Monofilament screen. Use one flood stroke and one print stroke for best results. Two print strokes can be used for added opacity when printing through 230-mesh t/in (90 t/cm). Adding pigment to **Optilux™ 505** ink will shade the ink slightly to a desired color, but adding too much pigment will diminish the reflective properties of the ink.

Note: It is not recommended to print **Optilux™ 505** ink over an underbase print when printing on open weaved fabrics such as typical T-shirt type fabric.



For more information about **Optilux™ Ultra Reflective Ink Systems**
www.vizreflectives.com/optilux or www.iccink.com/optilux

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Technical Information

Ink Preparation

Optilux™ 505 ink must be mixed thoroughly with **Optilux™ 100 Coupler** before printing in order to obtain best wash and wear durability. **Optilux™ 100 Coupler** is provided in 2 fluid oz. (60 ml) and 8 fluid oz. (250 ml) containers. Stir thoroughly into the **Optilux™ 505 ultra reflective** ink prior to use. The recommended proportions are:

By weight: 20 grams of ink to 1 gram of **Optilux™ 100 Coupler**.

Pot life of mixed ink is approximately 8 to 12 hours. Do not mix more ink than is needed for the job. Any mixed ink not used within 12 hours should not be used again.

Screen Application

Use 160 t/in to 230 t/in (63 t/cm to 90 t/cm) Monofilament. Printing through a coarser mesh may reduce the reflective quality of the ink.

Use a 110 t/in to 160 t/in (43 t/cm to 63 t/cm) for an underbase prints on tightly woven fabrics.

Use any direct lacquer resistant emulsion or capillary film.

Squeegee

60-70 Durometer: Sharp Edge

Ink Cure Temperature

325°F (163°C) entire ink film. Test dryer temperatures and wash test printed product before and during a production run.

Clean-Up

Mineral Spirits or any environmentally friendly plastisol screen wash.

Packaging

Quart, 1 Gallon, or 5 Gallon Containers.

Storage of Ink Containers

Recommend storage at 65°F to 90°F (18°C to 32°C). Avoid storage in direct sunlight. Keep containers well sealed.

Product MSDS

Refer to material safety data sheet: **Optilux™ 505**.

Viewing Instructions

Hang printed garment in a dark room so that the printed portion of the design is fully visible. Stand directly back from the print, 10 feet or more, and hold a flashlight next to your head, eye level and point the light directly at the print. Light should be reflected directly back to the viewer.

Important Information

Optilux™ 505 Ultra Reflective Inks are ready for use as supplied. For best results, product should not be modified with any viscosity reducers or thickeners. Viscosity of this product is already low and any modifications can result in poor reflective quality.

Always stir **Optilux™ 505 Ultra Reflective** Inks thoroughly prior to each use. The reflective microspheres used in the ink will settle in the container when ink is stored for any length of time.

The retroreflective properties of **Optilux™ 505 Ultra Reflective** Ink can be diminished by using an improper screen mesh, under-curing, by adding other inks, pigments or additives to the ink.

Always pre-test this product before using in production. Check for reflectivity, opacity, adhesion, wash durability and any other attributes that are required for your particular application.

For best long term wash durability of printed fabric, machine wash finished product in cold water, delicate cycle, and wash inside out. Do not use bleach. Do not iron on printed area of garment. Recommend line or hang dry. The reflective quality of the **Optilux™ 505** product should improve after the first washing.

Recommendations and statements made are based on International Coatings and Viz Reflectives research and experience. Since International Coatings and Viz Reflectives do not have any control over the conditions of use or storage of the product sold, International Coatings and Viz Reflectives cannot guarantee the results obtained through use of its' products. All products are sold and samples given without any representation of warranty, expressed or implied, of fitness for any particular purpose or otherwise, and upon condition that the buyer shall determine the suitability of the product for its own purpose. This applies also where rights of third parties are involved. It does not release the user from the obligation to test the suitability of the product for the intended purpose and application.

Optilux™ reflective ink comparison



Object visibility using other reflective ink systems



Object visibility using **Optilux™ reflective ink systems**

*Based on a garment using full coverage

Optilux™ Ultra Reflective Ink is available as the following :

Optilux™ Ultra Max

Additional variations will be available soon,
check our website for more details at www.opti-lux.com

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