

200 & 210 Series UV Dry Litho Screen Ink

Code Ref: D200 & D210

technical information and application instructions

200 Series – Non-varnishable

210 Series – Varnishable

Substrates	Properly treated polyethylene (HDPE) and polypropylene (PP) containers.
End Uses	Cosmetic, hair products, paint containers, pharmaceutical, chemical, and specialty product container packaging.

Product Information

The 200 & 210 Series are a 100% solids UV-curable printing inks designed for high-speed Dry Offset printing of treated polyethylene & polypropylene containers. Properly cured, these inks will exhibit excellent adhesion, as well as superior resistance to solvents, chemicals, and other products.

The 200/210 Series printing ink exhibits a semi - high gloss finish in all colours. This ink is intended to work well straight from the container on a wide range of today's Dry Offset printing equipment with very low misting and intense colour strength and low dot gain.

General Guidelines

While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. See full disclaimer at the end of the document.

Printing Pre-testing and proofing of colours is recommended to determine suitability to substrate and printing conditions. These products are not formulated for direct food applications

Adhesion Testing Even when recommended UV energy output levels are achieved, it is imperative to check adhesion on a cooled down print by checking:

1. **Touch of ink surface** – The 200/210 ink will be smooth and slick.
2. **Thumb twist** – The ink surface will not mar or smudge.
3. **Scratch surface** – The 200/210 ink will resist scratching when cool.
4. **Cross hatch tape test** – Use a cross hatch tool, or a sharp knife to cut through ink film only, apply 3M #600 clear tape on a cut area, rub down and rip off. Ink should only come off in actual cut areas.

Full adhesion characteristics will be demonstrated within 8 hours after cure.

[continued...]

manufacturing under licence to NAZDAR

200 & 210 Series UV Dry Litho Screen Ink

Code Ref: D200 & D210

technical information and application instructions

Colour Availability These inks are normally matched by GL to customers' requirements, Single pigment base colours can be supplied for customers own matching of colours. Lightfast inks are available on request.

Cure Parameters The 200/210 Series Inks are formulated to cure at typical modern production speeds of 20 x 20 litre containers or 30 x 5 litre containers per minute with properly maintained automatic equipment.

Millijoules: radiometer readings in Millijoules represent the total amount of UV energy arriving on the surface. In container printing, the total amount of energy the ink and the container is exposed to depends on the number of bottle rotations under the curing unit. A minimum of 100 Millijoules is required, however up to 300 Millijoules may be necessary to cure certain colours.

Milliwatts; The radiometer readings in Milliwatts represent the penetrating power of the UV energy arriving at the surface. A minimum of 600 Milliwatts may be necessary for through cure.

Milliwatt & Millijoule readings done using an EIT – Microcure Data Reader

Due to the fast cure speeds of the 200/210 Series, care should be taken during printing to minimize unwanted ultraviolet light exposure to the screen. Be aware of skylights, windows, and overhead lights possibly curing the ink in the screen. Precautions include the use of light filters that block out the damaging wavelengths.

If ink is left on the press while not printing (lunch breaks etc.) it is advisable to cover exposed ink with black plastic sheeting.

Reducer D590-S327 UV Dry litho reducer to reduce tack and viscosity if required.

Wash-up D574-S045 UV Dry litho wash-up.

Ink Handling Direct contact with the skin is the primary route of exposure and irritation with UV inks. Therefore, it is recommended that all personnel mixing and handling these products wear gloves and barrier cream to prevent direct skin contact. Safety glasses are suggested in areas where ink may be splashed. If ink does come in contact with skin, wipe ink off with a clean, dry absorbent cloth or rag (**DO NOT USE SOLVENT OR REDUCER**). Proceed to wash and rinse the affected area with soap and water. Consult the 200/210 MSDS for further instructions and warnings.

Storage These inks are reactive to light and temperature extremes. Store in a clean area below 35°C sealed tightly in dark plastic containers out of direct sunlight. For maximum shelf life, store ink in ambient temperatures of 15°C to 30°C. Ink taken from the press should not be returned to the original container; store separately to avoid contaminating unused ink.

Shelf life of sealed bucket is 1 years. Has potential to solidify once opened and exposed to light.

[continued...]

200 & 210 Series UV Dry Litho Screen Ink

Code Ref: D200 & D210

technical information and application instructions

caution

Please proof this ink, reduced to the consistency you wish to adopt, on a sample of the ACTUAL SUBSTRATE you will be printing BEFORE starting a production run.

Give the proof 4 hours to post cure then check for: Abrasion resistance, adhesion, print appearance and correctness of colour. The adequacy of this ink in these properties cannot be fully established on laboratory equipment on a small scale.

Based on information from our raw material suppliers, these products are formulated to contain less than 0.06% lead. If exact heavy metal content is required, independent lab analysis is recommended.

GL stands behind the quality of this product. GL cannot, however, guarantee the finished results because GL exercises no control over individual operating conditions and production procedures. While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. Users are also responsible for testing to determine that our product will perform as expected during the printed item's entire life cycle from printing, post-print processing, and shipment to end-use. This product has been specially formulated for screen printing, and it has not been tested for application by any other method. Any liability associated with the use of this product is limited to the value of the product purchased from GL.

[end]

Last date amended: 6 February 2023