

Biocure Two-Pack Curing Screen Inks

Code Ref: D482 | D487 | D488

technical information and application instructions

Substrates This is a reactive acid catalyst system. Inks are suitable for printing on treated polyethylene containers, e.g. for detergents, oils and household cleaners.

End Uses When the polyethylene used for the containers contains anti-static agents (amines), this could lead to loss of adhesion on aging. Prints have good brake fluid and alcohol resistance.

Product Information

Biocure is a two-pack catalysed ink system designed to print on polyethylene containers. This is a non-convertible ink system. Do not let this product dry on the screen as it cannot be rewet with solvents. Your screen will be permanently blocked if it is left for too long.

Application Information

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 end of document.

| | |
|-----------------|---|
| Mesh | 90T to 120T mesh recommended. |
| Stencil | All direct photo emulsions, photo stencil films and hand cut stencil films that are solvent resistant. |
| Squeegee | Sharp edge 70-80 durometer polyurethane blades as well as triple durometer blades that produce an even ink deposit. |
| Coverage | Approximately 20-25sq. meters per kg of ink – 90T mesh. |
| Printing | Biocure Two-Pack Curing Screen Inks dry to a gloss finish. |
| Drying | 90 seconds at 80°C. Air dry 20 – 40 minutes. Full curing is only achieved after 24 hours. |

Cleaners / Extenders / Additives

| | |
|-----------------|---|
| Thinner | Use Biocure Reducer N665-S280 |
| Retarder | Use Biocure Retarder N665-S282 |
| Extender | Biocure Clear – D482-A444 - can be added to reduce strength or as a clear base for metallic colours (Refer Metallic Colours Mixing Guidelines later in this TDS). |

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Mixing Ratio with Catalyst

It is recommended that the ink is thinned first before the catalyst is added. For multi-trip bottles, the recommended ratios are:

| | | | |
|----------|-----|-----------------|------|
| White | 100 | Colours & Clear | 100 |
| Thinner | 6 | Thinner | 8-15 |
| Catalyst | 13 | Catalyst | 14 |

These high levels of catalyst are necessary to achieve maximum resistance to both product and bottle washing.

For single trip bottles, 5-7% catalyst should be adequate to achieve good adhesion.

Only mix small quantities of ink at one time – at the multi-trip catalyst level, the pot life is 8-10 hours, at lower catalyst levels this will increase.

Never put back any catalysed ink in the original tin – all the ink will eventually go solid.

N482-S242 Catalyst - for Biocure, the mixing ratio is 10 parts ink to 1 part catalyst, however, in cases where 4 or 5 colours are printed over a white, the catalyst ratio should be as follows:

| | | |
|------------------------|--------------|-----------------|
| 1 st Colour | 14 parts ink | 1 part catalyst |
| 2 nd Colour | 13 parts ink | 1 part catalyst |
| 3 rd Colour | 12 parts ink | 1 part catalyst |
| 4 th Colour | 11 parts ink | 1 part catalyst |
| 5 th Colour | 10 parts ink | 1 part catalyst |

Note: N482-S242 was previously coded J482 S064 or D482 A019.

Opacity

Good, unless transparent colours are requested.

Mixing / Overprint Clear

D482-A444 Mixing/Overprint Clear may be used to reduce colour strength or as a metallic mixing varnish. (see metallic colours).

Metallic Colours

Metallic pigments may be added to the inks as a component of a colour match or to D482-A444 Mixing/Overprint Clear. Due to possible limited shelf life, only mix quantities of metallic ink needed for immediate use. Leafing pigments may show incompatibility to the ink. Excessive amounts of metallic powder will degrade adhesion and the overall performance of the printed ink.

Recommended Ratios: Metallic Powders

| | | |
|--------------------|---------------|----------------------------|
| Silver (Aluminium) | 8% by weight | 80gms powder to 1kg Clear |
| Gold (Bronze) | 15% by weight | 150gms powder to 1kg Clear |

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Clean Up N665-S280 – Epoxy Thinners/Wash

(or N660-S344 Screen wash – generally not as effective.)

It is essential to clean screen immediately after printing or stopping for e.g. tea break – the ink will cure in the screen during the stoppage and will be impossible to remove.

General Guidelines

Ink Handling All personnel mixing and handling inks must wear gloves and eye protection. Clean up spills immediately. If ink does come in contact with skin, wipe off with a clean, dry, absorbent cloth (do not use solvent or thinner). Wash and rinse affected area with soap and water. Consult the Biocure SDS for further instructions and warnings.

Adhesion Testing Test adhesion as follows:

1. **Touch of ink surface** – The ink will be smooth and slick.
2. **Thumb twist** – The ink surface will not mar or smudge.
3. **Scratch surface** – The ink will resist scratching.
4. **Cross hatch tape test** – use a cross hatch tool or a sharp knife to cut through the ink film only, apply 3M #600 clear tape to the cut area, rub down, wait for 1 minute and rip off at a 180° angle. Ink should only come off in the actual cut area.

Storage Store tightly covered at temperatures between 15°C - 32°C. Ink taken from the press should not be returned to the original container. Store separately to avoid contaminating unused ink.

Shelf life of unopened cans is 2 years from date of manufacture. Stir well before use. Shelf life of the catalyst is 1 year from date of manufacture in a sealed container.

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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 24 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.

Keep away from heat and open flame. Use with adequate ventilation. Avoid prolonged or repeated contact with skin. Avoid prolonged breathing of vapour or spray mist. Keep container closed when not in use.

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.

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Last date amended: 7 February 2023