

Repet Polyester Screen Ink

Code Ref: 424

technical information and application instructions

Substrates This product is designed for use on PET Bottles. May be suitable for untreated polyester, polyester coated surfaces, some treated or top coated polyester films, and polycarbonate.

End Uses PET bottles. May be suitable for decals, and nameplates.

Product Information

1. Repet is designed for use on returnable PET bottles and inks for this application must be formulated using pigments that have both good lightfastness and resistance to hot caustic soda solutions (as used in a bottle washer). The use of an overvarnish is required to maximize the number of "trips" the bottle can be used for.
2. For single trip bottles the requirements are not as stringent. An overvarnish on a single trip bottle is not necessary but because of the wide range of products that may be packed, pigments must be selected appropriately for resistance.

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 75-130T monofilament polyester meshes are recommended.

Stencil All direct photo emulsions, photo stencil films and hand cut stencil films that are solvent resistant.

Squeegee 70 to 80 durometer polyurethane blades as well as triple durometer blades that produce an even ink deposit.

Coverage 30-50 sqm/kilo depending on mesh used – 90T – 120T.

Printing Repet Inks must be thinned with approximately 10% N665-S377 Thinner or N660-S339 Retarder. The use of a mixer is recommended to thoroughly mix inks prior to printing.

Inks will maintain optimum print performance when the ink temperature is 18°C – 32°C. Shop conditions vary; it is recommended to pre-test the ink and additive combination to determine optimum printing performance for a particular set of substrates, screen, press and drying oven.

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Drying Refpet Inks dry by solvent evaporation. Refpet will air dry in 20 – 40 minutes or may be force dried at temperatures 32°C - 66°C in seconds. Good air circulation is necessary to remove vaporized solvents.

Overprints may require longer drying times than a single layer.

Cure The catalyzed ink film will continue to cure after initial drying. For complete curing, bake at 60°C for 4 hours or allow at least 3 days in room temperature before final product testing.

Cleaners / Extenders / Additives

Thinner To improve flow or accelerate drying, reduce the ink with 5% - 15% by weight of N660-S377 Thinner.

Retarder To improve screen stability during hot climate conditions or for slower drying, reduce the ink with 5% - 10% by weight N660-S339 Retarder. Do not exceed recommended levels of reduction. Over reduction with retarders can result in blocking.

Catalyst Refpet is a catalysed system. Use only Refpet Catalyst N690-S090. This is available in 200gm and 1 kilo containers. Keep catalyst container securely closed as the catalyst is sensitive to atmosphere moisture and will go hard.

Mixing Ratio 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.

Mixing Overprint Clear

D424-A004 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 D424- A004 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.

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- Adhesion Testing** **Cross hatch tape test** – use a cross hatch tool or sharp knife to cut through the ink film only, apply 3M #600 clear tape on cut area, rub down and rip off. Ink should only come off from the actual cut areas.
- Fingernail scratch test** – thoroughly dried ink will resist scratching.
- Clean Up** Use N660-S344 Universal Screen Wash for cleaning ink from the screen.

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 Repet SDS for further instructions and warnings.
- Storage** Store tightly covered at temperatures between 15°C - 32°C. Ink taken from the press must not be returned to the original container; store separately to avoid contaminating unused ink – all will gel.
- Shelf life of unopened cans is 5 years from date of manufacture. Stir well before use.
- Catalyst is moisture sensitive, shelf life 1 year from when packed.

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