

IcoTex PFL

Resistant inks for Printed Fabric / Care Labels

Issue No. 008/2019

The IcoTex PFL product range is designed for printing with Letterpress / Letterflex printing machinery, onto a wide range of fabrics, for label applications.

The product will provide an opaque, durable, washing and dry cleaning resistant film to meet stringent customer requirements.

Recommended Fabrics

IcoTex PFL inks are suitable for printing onto the most demanding care label materials, including, Polyester, Nylon, coated Nylons (PU, Acrylic), cottons, poly-cottons, Silk Organza, PMMA and Tyvek.

PFL inks also exhibit excellent adhesion to most reflective materials for safety applications.

Product Resistance

IcoTex PFL inks have excellent adhesion and flexibility on many fabrics which have been treated for water resistance. Some fabrics may be finished or impregnated with certain waterproofing agents that may impair adhesion, even a considerable period after printing.

Applications requiring maximum adhesion and resistance, it is recommended to catalyse the ink before use.

For maximum Opacity, print without adding any thinner. Where lower opacity is tolerable, further improvements to adhesion may be achieved by printing at a lower viscosity to aid penetration into the fabric.

IcoTex PFL inks are supplied as **one-pack** and **two-pack** respectively.

Estimate the amount of ink required for a day's work and thoroughly mix the ink base and catalyst in the following ratio:

IcoTex PFL Ink	95 - 90 parts by weight
IcoTex PU386 Catalyst	5 - 10 parts by weight

Catalysed inks have a pot life of approximately 8 hours. If printing is completed or interrupted for more than 1 hour, it is recommended that the Ink Duct, Anilox Roller and Photopolymer plate must be thoroughly cleaned to prevent permanent damage. Catalysed ink left over at the end of the printing run must be discarded.

Uncatalysed two-pack inks have excellent wash fastness to I.S.O. Test No. 1 to 40°C.

Uncatalysed one-pack inks have excellent wash fastness to I.S.O. Test No. 3 to 60°C.

Catalysed inks have excellent wash fastness to I.S.O. Tests Nos. 3 to 60°C, and 4, to 95°C.

The fastness properties will vary depending on the fabric and whether catalysed or uncatalysed ink is used.

Main Characteristics

Usage Properties

Excellent opacity and colour strength
Excellent physical and chemical resistance.
Conforms to most Restricted Substance Lists

Colour Range

For two-pack ink system, 9 intermixable colours, Dense Black, Opaque White and a mixing clear base.
For one-pack ink system, Dense Black and Opaque White are available

Catalyst

PU386 Cross-linker - Use at 5-10% level.

Drying and curing

Printed labels can be dried at 90-180°C.
Prints should be fully dried before sintering to ensure maximum resistances are obtained.

For two-pack ink system, sintering at 60-80°C for 4 to 6 hrs is recommended. If sintering is unavailable, allow the product to fully harden for 24 hrs before conducting physical and washing resistance test.

For one-pack ink system, the prints must be sintered at 100-125°C for 4 to 6 Hrs. If sintering is unavailable, the inks can be used as a two-pack ink system.

Recommended Anilox

Heavy line and solid 150 - 180 lines per inch
Fine text and process work 300 - 500 lines per inch

Thinning & Wash-up

For thinning and slowing down the ink's drying speeds, use **ZV557** retarder- Use up to 15% as required.
For maximum opacity print un-thinned.

Wash-up printing equipment using **ZTC639** universal cleaning solvent.

Cleaning of photopolymer plates should be done with **ZV558** only, to ensure minimal plate swelling

Applications

Printed Fabric Label (PFL), Care labels, and safety labels.

IMPORTANT: Stir well before every use. Always test application fully before beginning production run as supposedly similar materials can vary between different manufacturers and even between different batches. Certain materials may be impregnated with lubricants or anti-static additives which, like migrating plasticisers, may impair adhesion even a considerable period after printing.

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Colour Matching

Colours can be supplied against prints, wet ink samples or to PANTONE®* references, British Standard, 'HKS' or 'Munsell' numbers. A sample of the substrate to be printed, with the number and type of mesh to be used, should be attached to orders.

The product resistance required of special matches may be very important and it is necessary that full details are supplied of the process to be followed and the product to be packed into the container.

Minimum quantity 5 kg.

*PANTONE® is the property of Pantone, Inc

Colour Range

IcoTex PFL inks are available in 12 intermixable colours with Pantone Matching System.

Two-pack system

PFL009	Dense Black
PFL025	Opaque White
PFL064	Yellow (Green Shade)
PFL066	Yellow (Red Shade)
PFL114	Orange
PFL121	Red (Yellow Shade)
PFL127	Violet
PFL164	Red (Blue Shade)
PFL165	Magenta
PFL230	Blue
PFL325	Green
PFL381	Mixing Clear

One-pack system

PFLA09	Dense Black
PFLA25	Opaque White

ZV557 Thinner and Retarder

PU386 Cross-Linker

Available in 1KG container.

Storage

Containers should be tightly closed immediately after use. At the end of long printing runs, surplus ink from the screen should be disposed.

Any remaining product that has **PU386** cross-linker added to it should be disposed of, after printing.

Containers should not be stored in direct sunlight or near warm pipes and should be kept away from peroxides. In the interest of maximum shelf life, storage temperatures should be between 10°C and 25°C.

When stored in a cool environment the inks are expected to have a shelf life of approximately 24 months from the date of manufacture.

Safety and Handling

IcoTex PFL:

- Is formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.
- Have a flashpoint greater than 61°C and are not classified as a 'dangerous substance' under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)
- Is formulated free from lead and other heavy metals and therefore should comply with the EN71-3 Toy Safety Standard.
- Is formulated to comply with OekoTex Class 1, RoHS, REACH SVHC, and most Brand RSL requirements.
- Is formulated free of Formaldehyde, Organotins, Heavy Metals, APEO, NPEO and PVC.
- Should be stored away from heat.

Comprehensive information on the safety and handling of IcoTex PFL inks and solvents is given in the MSDS, available on request.

Environmental Information

IcoTex PFL:

- Does not contain ozone depleting chemicals as described in the Montreal Convention.

The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product Information sheet out of date and users are requested to ensure that they follow current recommendations.

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