



HYDROTEK

WATER-BASED FLEXO LABEL PRINTING INKS

HydroTek water-based inks are formulated for narrow-web flexo printing onto various substrates for the production of self-adhesive labels.

KEY FEATURES

- Excellent printability and press-stability characteristics
- Supplied press-ready at optimum printing viscosity
- High gloss
- High colour strength
- Good scratch and rub resistance immediately after printing
- Suitable for all paper stocks
- Good adhesion to a wide range of synthetic substrates

PRODUCT REFERENCES

Reference	Description	Lighfastness (Blue Wool Scale)
40W5 0051	PMS Yellow	4
40W5 0052	PMS Warm Red	5-6
40W5 0053	PMS Rubine	4
40W5 0054	PMS Rhodamine	3
40W5 0054LF	Lightfast Rhodamine	7-8
40W5 0055	PMS Purple	4
40W5 0055LF	Lightfast Purple	7-8
40W5 0056	PMS Violet	3
40W5 0056LF	Lightfast Violet	7-8
40W5 0057	PMS Reflex Blue	3-4
40W5 0057LF	Lightfast Reflex Blue	7-8
40W5 0058	PMS Process Blue	7
40W5 0059	PMS Green	7
40W5 0060	Mixing Black	7
40W5 0062	PMS Yellow 012	4
40W5 0063	PMS Orange 021	5
40W5 0064	PMS Red 032	5
40W5 0065	PMS Blue 072	3-4
40W5 0485	PMS 485 Red	4
40W7 0600	Dense Black	7
40W1 1001	Process Yellow	4
40W2 1002	Process Magenta	4
40W3 1003	Process Cyan	7
40W4 1004	Process Black	7
40W6 0061	Transparent White	
40W6 0266	Opaque White	

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PRINTING GUIDELINES

General

Shake the container well before use.
 Clean printing press thoroughly prior to printing.
 Ensure underlying inks are dry before overprinting.
 Synthetic substrates should be pre-treated and tested to ensure adequate ink adhesion.
 Rub and other resistance properties should be checked dependent upon application.
 Short production runs should be used to confirm that the desired results are achievable.
 High ink film weights may enhance the colour effect but ensure that the ink is thoroughly dried.

Printing Plates

HydroTek inks are suitable for printing with most plate materials recommended for water-based inks. Consult with your plate supplier if in doubt.

Anilox Rollers

Colour strength is highly dependant upon anilox roll configuration. The following table serves as a guideline only.

	Pantone	Solids	Process
Lines /cm	160	120 – 180	240 – 320
Lines /inch	400	300 – 450	600 – 800
Cell Depth (µ)	10	20 – 40	6 – 12
Volume (cm ³ /m ²)	5.0 – 6.0	8.0 – 12.0	1.5 – 4.0
Angle	45 & 60	45 & 60	45 & 60

Substrates

Papers - HydroTek inks are designed to be used on both uncoated and coated papers. Scuff, smudge, water and moisture resistance may vary dependant upon the ink filmweight, type of paper and drying conditions.

Thermal Papers - HydroTek is suitable for printing on top-coated, semi-coated and economy thermal papers. We recommend that thorough testing is made to ensure suitability prior to commencing a full print run. Resistance properties may be enhanced by over-lacquering with one of our water-based or UV-curing varnishes. Please consult us for a product recommendation.

Plastics - HydroTek has good adhesion to a wide range of non-absorbent materials such as PE, PP and PVC, giving good scratch and rub resistance. Surface energy levels of between 38 – 42 dynes/cm are recommended; this may be achieved by pre-treatment using corona discharge, flame, plasma or other methods. Inline pre-treatment usually gives the best results. Production testing is always recommended to ensure adequate ink adhesion and resistance properties. Very high surface treatment levels may result in poor water resistance. Please consult us for recommendations for difficult substrates.

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Hot-foil Stamping

HydroTek inks are suitable for hot-foil stamping. Results may vary dependant upon the ribbon and processing conditions.

Laser Overprinting

HydroTek inks are not suitable for laser overprinting.

Printing Speeds

HydroTek inks are fast drying and the following print speeds are typical:

	Process Colours	Line Colours / Solids
Print Speed (m/min)	100 -150	80 - 150

Dryer temperatures should be at least 50°C with maximum airflow to ensure sufficient drying. Higher print speeds might be achievable on presses with combination IR and hot air dryers.

Resistance Properties

Optimum resistance properties normally do not develop for at least 24 hours. For enhanced chemical and other resistance properties we recommend over-lacquering with one of our water-based or UV-curing varnishes. Please consult us for a product recommendation.

Cleaning

Wet and partially dry HydroTek inks can be cleaned with *40W9 0004 Wash-Up Solution*.

40W9 0017 Superclean Wash is recommended to remove dry ink as well as deep cleaning of anilox rollers.

Additives

A full range of press-side additives is available to cover any requirements:

See separate data sheet for complete application and ink troubleshooting guidelines.

Reference	Description	Comments
40W9 005	Accelerator	Use up to 5% to increase drying speed
40W9 006	Retarder	Use up to 5% to slow down drying speed
40W9 007	Antifoam	Add 2 - 4% to control any foaming issues
40W9 009	Stabilising Varnish	Use to maintain ink pH and viscosity
40W9 0012	pH Refresher	Use on long print runs to maintain pH
40W9 0013	Reducer	Use to reduce ink viscosity
40W9 0014	Transfer Additive	Use up to 5% to increase transfer and colour
40W9 0015	Wax Additive	Use up to 5% to improve scratch and scuff
40W9 0016	Silicone Additive	Use up to 5% to increase slip properties
40W9 09295	Slow Retarder	Use up to 3% to slow drying speed significantly
40W9 0004	Wash-Up Solution	For general purpose cleaning
40W9 0017	Superclean Wash	For heavy duty cleaning

Storage

Store at ambient temperatures in sealed containers. Protect from frost.

Nominal shelf life is 6 months in correctly stored, unopened containers.

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Packaging

Standard packaging is 5.0 kg plastic containers.

Health & Safety

Please refer to the product Safety Data Sheets.

Good industrial hygiene should always be practiced with these types of products. Use personal protection equipment as specified by the SDS.

Waste Disposal

Please refer to the SDS.

Organoleptic Properties (Taint and Odour)

If tested, the products may be suitable for certain low odour applications.

Migration

Paper, carton and plastic materials such as PE or PP normally do not offer a sufficient barrier to prevent migration of low molecular weight ink or varnish components. Glass, metal and some metallised laminates are usually more efficient as functional barriers. There should be no visible set-off of ink onto the food contact side of printed material. Packaging and processing should be designed such that there is no possibility for continuous ink contact with foodstuffs.

Food Compliance Declaration

Please refer to separate documentation. HydroTek inks are not suitable for direct food contact.

Within the European Union (EU) it is the responsibility of the manufacturer, importer or distributor of food contact materials and articles, or those who place them in contact with food prior to sale, to ensure that their products comply with the appropriate legislation.

We therefore strongly recommend that the final printed article is analysed by an accredited institute to ensure legal compliance before putting it into circulation.

Declaration of Composition

Please refer to separate documentation.

Please contact us for any questions regarding the suitability of this product for a particular application or compliance to a particular standard.