

Technical Data Sheet

Date of issue: 21.05.2023

Version No: 02

INKMASTER PU NT Ink Series



Description

PU NT ink is a non-toluene, highly pigmented and low viscosity Gravure Inks for reverse printing applications. This product is used for printing on CT BOPP, CT Pet, CC Pet & Plain film for excellent adhesion.

End Use

PU NT ink is designed for high speed and premium quality printing. This is especially used for food packaging such as coffee, biscuits, snack foods, cooked foods, confectionery etc. High chemical resistant and free from heavy metals and toluene. This ink has excellent adhesion on Nylon film without additional additives.

Printing Machines & Press Speed

PU NT ink is originally designed as very highly pigmented suitable for fast running
Note -1: As mentioned above these inks originally are of very high strength, suitable for use on very high-speed Roto-Gravure printing machines.
Note -2: In view of very high strength and superior transfer (from cylinder to substrate) properties of these inks, we recommend use of shallow cylinder engraving. This ensures low ink consumption as well as better ink drying speed.
Note -3: We also recommend very high volume (in Cubic Meters) of air-flow @ around 600 C to ensure drying of these inks.
Note -4: Availability of the Chilling rollers at the end of printing stations (before re-wind) or after each of the printing unit helps in ensuring proper drying and setting of these inks.

Printing Substrates:

- BOPP (Corona treated 38-42 Dyne/cm) – Reverse printing.
- Corona Treated & Chemically Coated PET films. Plain PET films – advised to check in advance for lamination bond before undertaking log commercial runs.
- Other films after verifications.

Benefits

- Very high pigment strength ink.
- Excellent flow at low viscosity.
- Medium to High solids.
- Good Printing Stability.
- High Transparency & High bond strength.
- Excellent adhesion to recommended printing substrates.
- Excellent solvent release, enabling high press speeds to be used.
- Excellent freeze resistance: making the ink suitable for the extreme cold weather countries.
- Extra-ordinarily good dot-transfer properties.
- Good Printing Stability and Excellent Dot Reproduction (up to 7 % Dots) at higher print speeds.
- Use of solvent based and solvent less laminating adhesives possible.
- Lamination process could be begun immediately after printing process – no need to wait for 24 hours as in the case of NC-PU ink systems.

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Color Range



Full range of colors is available, which may only occasionally be restricted by specific end use related resistance properties requirements.

Process Colour Range:

Product Description	Ink Solid %	Viscosity (Sec)Ford Cup /30°C	L.F.(1-8 Scale)
PU NT PRO. BLACK SUPER	24 ± 2	22 ± 5	7
PU NT PRO. YELLOW	20 ± 2	25 ± 5	4
PU NT PRO. YELLOW REDDER	20 ± 2	22 ± 5	4
PU NT PRO. CYAN -	22 ± 2	22 ± 5	7
PU NT PRO. MAGENTA	22 ± 2	22 ± 5	4-5

White, OPV and Extender Medium:

Product Description	Ink Solid %	Viscosity (Sec)Ford Cup /30°C	L.F.(1-8 Scale)
PU NTNM REV MEDIUM	16 ± 1	20 ± 5	N. A
PU NTNM WHITE	40 ± 2	22 ± 5	7

Standard Color Range

Product Description	Ink Solid %	Viscosity (Sec)Ford Cup /30°C	L.F.(1-8 Scale)
PU NT BLUE ROYAL	22 ± 2	22 ± 5	3
PU NT BLUE ROYAL ARSR	22 ± 2	22 ± 5	6-7
PU NT SP. MAGENTA - ARSR	22 ± 2	22 ± 5	5-6
PU NT RED TR	22 ± 2	22 ± 5	3-4
PU NT RED ARSR	22 ± 2	22 ± 5	5-6
PU NT TR ORANGE	22 ± 2	22 ± 5	5
PU NT TR GREEN	22 ± 2	22 ± 5	7
PU NT REV PINK	22 ± 2	22 ± 5	3-4
PU NT VIOLET - Non ARSR	22 ± 2	22 ± 5	3
PU NT TRANS YELLOW ARSR	20 ± 2	25 ± 5	4-5
PU NT VIOLET ARSR	20 ± 2	22 ± 5	7
PU NT GOLD INK	20 ± 2	35 ± 5	NA
PU NT SILVER INK	20 ± 2	35 ± 5	NA

Note: Several special shades as well as Dye Based Lacquers and Imitation Gold shades also are available as per customer requirement.

Printing Viscosities (Dilution Requirement):				
	DIN Cup 4	AFNOR Cup 4	Ford 4 Cup	Zahn 2 cup
Gravure printing	14-17 sec	15-18 sec	13-16 sec	19-21 sec

*The above figures are given for guidance only.

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Dilution:



Solvent and solvent blends used for dilution may need to be adjusted in accordance to printing conditions: Namely, printing process, printing speed, oven capability, and graphics such as solids, lines, half tone, vignette and process printing.

To achieve good DOT Re-reproducibility use of extra retarder, such as Me-thoxy Propyl Acetate/ MIBK is recommended

Depending on printing conditions, the following solvents may be used as retarder or accelerator

Accelerator - Ethyl Acetate, MEK

Medium - N - Propyl Acetate, N Propyl Alcohol (80:20)

Retarder - Methoxy propanol, Ethoxy propanol, Dowanol PM

Reducing System	
Ethyl Acetate: MEK: IPA	40: 40: 20
Toluene: MEK: IPA	50: 40: 10
N propyl Acetate: N Propyl Alcohol	80: 20
N propyl Acetate: Ethyl Acetate	90:10

*It is always better to mix the solvents before adding to the ink.

*Always shake the container vigorously before emptying the inks

Shelf Life

The inks and varnishes of this series have under normal conditions a shelf life of at least **6 months** (White) and **12 months** (all colors).

- Normal conditions mean:
- Storage in tightly closed containers.
- Temperature not exceeding 25°C for weeks or 30°C for days.

Please take notice of the following:

The performance results indicated in this literature are only indicative under controlled conditions of laboratory with virgin & standard packaging grade films. Please do not use lower grades or substandard films. **Berger Paints Bangladesh Ltd.** will not take any responsibility for abnormal results on those cases.

Berger Paints Bangladesh Ltd. is responsible only for the tuning or replacing the ink consumed in case of any printing related problems clearly assigned to incompatibility with the ink system recommended by **Berger Paints Bangladesh Ltd.** If you require any further information please do not hesitate to contact us or visit our website.