



REF No.:	TDS/013
Rev. Date:	25/03/2013
Issue Date:	25/03/2013
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Version No.	02

Technical Data Sheet :

Product Identification:

TRU ULTRAPOLY SURF SERIES

DESCRIPTION: **TRU ULTRAPOLY SURF SERIES** is a range of highly pigmented and low viscosity inks, for Flexo as well Gravure high quality **surface printing** applications. Optimized to give best printing results at very high press speeds.

END USE: **TRU ULTRAPOLY SURF SERIES** is designed especially for printing of carry bags, bread bags, shopping bags, snack food and frozen food packaging etc.

PRINTING MACHINES: **TRU ULTRAPOLY SURF SERIES** is tailored to run effortlessly on High Speed CI Flexo Presses as well as on Flexo Stack Presses. These inks perform equally well when employed on Gravure printing machines also. Since the inks are of high strength, we recommended that for Gravure printing. Customer to dilute the inks with medium and Reducer.

Printing Substrates:

- ✓ Polyethylene (Corona treated, preferably > 38 Dyne/cm)
- ✓ BOPP(Corona treated 38-42 Dyne/cm)
- ✓ Acrylic coated polypropylene
- ✓ Corona Treated PET,
- ✓ CC-PET
- ✓ Metallised film (Prior check and/or use of primer is necessary)

Specific Features:

- ✓ High strength inks
- ✓ Good Printing Stability
- ✓ High Transparency ink
- ✓ Good Blocking resistance
- ✓ Excellent Gloss
- ✓ Excellent adhesion on different filmic substrates
- ✓ Good scuff resistance & slip properties: Could be further enhanced by Employing TIL Slip & Scuff Additive (Code No. **UPA-2010-00**)
- ✓ Excellent solvent release, enabling high press speeds to be used
- ✓ Designed to exhibit a low coefficient of friction
- ✓ Excellent freeze thaw resistance: making the ink suitable for the extreme cold weather countries

Colour Range:

A full range of colors is available, which may only occasionally be restricted by end user requirements. The pigments used have reasonable commercial fastness to light but they may not withstand prolonged exposure to direct sunlight. If this property is required, it should be requested while placing orders.

Process Cololur Range:

Product Codes	Product Description	L.F (1-8 Scale)
UPK-2002-00	TRU ULTRAPOLY SURF BLACK SUPER	7
UPY-2003-01	TRU ULTRA POLYSURF YELLOW	5-6
UPC-2004-00	TRU ULTRA POLYSURF BLUE	7-8
UPM-2005-00	TRU ULTRA POLYSURF MAGENTA	4

White and Extender Medium:

Product Codes	Product Description	L.F (1-8 Scale)
UPE-2000-00	TRU ULTRAPOLY SURF MEDIUM EXTENDER	NA
UPW-2001-00	TRU ULTRAPOLY SURF WHITE SUPER	7

Standard Range:

Product Codes	Product Description	L.F (1-8 Scale)
UPY-2003-02	TRU ULTRAPOLY SURF YELLOW OPAQUE	3
UPY-2003-03	TRU ULTRAPOLY SURF YELLOW WARM	6
UPC-2004-00	TRU ULTRAPOLY SURF BLUE REFLEX	3
UPR-2006-01	TRU ULTRAPOLY SURF RED WARM	3
UPO-2007-00	TRU ULTRAPOLY SURF ORANGE	5-6
UPG-2008-00	TRU ULTRAPOLY SURF GREEN	7
UPV-2009-00	TRU ULTRAPOLY SURF VIOLET	5d

Printing And Processing:

	DIN Cup 4	AFNOR Cup 4	Ford 4 Cup	Zahn 2 cup
Gravure printing	15-19 sec	16-21sec	14-18 sec	20-23 sec
Flexo printing	19-22 sec	21-25 sec	20-24 sec	22-26 sec

Viscosity adjustment should be started only after the ink is well mixed (in circulation for at least 10 min) and the ink is at room temperature. Viscosity is adjusted by adding solvents slowly in small quantities. See under "Dilution".

The above figures are given for guidance only.

The Actual viscosity used will depend on a number of factors, including print design, press conditions, the machine running speed and the desired colour characteristics.

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 @ below 8% level, Use of Extra Retarder is Recommended

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

Accelerator: - Ethyl Acetate (for Gravuer) and Ethyl Alcohol :: 2:8
Medium:- N-Propyl Acetate, N-Propyl Alcohol :: 2:8
Slow / Retarder:- (Butyl Acetate- Methoxy Propyl Acetate)(Dowanol PM) :: 2:7:1

Reducing Systems:

We recommend as a basic ratio:

FOR GRAVURE PRINTING MACHINES:

NPA- N Propyl Alcohol	80
NPAC- N Propyl Acetate	20

NPA- N Propyl Alcohol	70
DOWANOL PM	10
ETHYL ACETATE	20

FOR FLEXP PRINTING MACHINES:

NPA- N Propyl Alcohol	80
NPAC- N Propyl Acetate	20

NPA- N Propyl Alcohol	70
DOWANOL PM	10
ETHYL ACETATE	20

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

No guarantees for our ink can be given if the above solvent reduction is not followed. The use of other solvents and solvent blends are known to cause problems such as blocking, odour and reduced adhesion. In extremely severe cases the wrong solvent can cause “Ink Curdling or Chuck Out” problem.

Shelf Life:

The inks and varnishes of this series have under normal storage conditions a shelf life of at least 6 months.

Normal conditions means:

- Storage in tightly closed containers
- No admixtures
- Temperature not exceeding 25°C for weeks or 30°C for days.

Short time excess-temperatures e.g. at transport are not harmful. The products are not sensitive to frost. "Over-stored" inks (typical symptoms: fall in gloss, shift in shade, formation of odour and / or viscosity increase) may normally – *off colour being exceptions* - be used the same way as residual inks by controlled admixture to fresh inks. Increased viscosity due to long-time storage of inks may generally be adjusted by addition of a slightly higher amount of thinner than the usual.

Please take notice of the following:

1. *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. Tirupati Ink Ltd., will not take any responsibility for abnormal results*

2. *Liability: While the information outlined is given in good faith, it does not constitute a guarantee and neither is one implied as to the specific end use suitability of any product. The customers should always evaluate the suitability of products to their own satisfaction*

2.1. *Tirupati Inks is responsible only to the tune of replacing the ink consumed in case of any printing related problems clearly assigned to in-compatibility with the ink system recommended by Tirupati Inks for the print job under consideration.*

If you require any further information please do not hesitate to contact us or visit our website.



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