

Micro UV - DPP

Fast Cure Speed, High Gloss Finish

UV Dry Offset Inks



UV cure inks for pre-treated polyethylene, polypropylene and polystyrene, HIPS, containers, labels and stickers

Application

Micro UV - DPP are UV curable dry offset inks formulated for high speed printing machines in food packaging and packaging sector. These inks can be used in the **letter press rotary and semi-rotary applications for labels, self adhesive stickers and lamitubes**. They have excellent resistance to products filled into the containers and are abrasion resistant

Characteristics

- Extremely wide operating latitude
- Excellent flow and transfer with sharp print definition
- Maximum color strength with clean, transparent hues
- High gloss finish
- Very low odour
- Fastest cure rate
- Excellent rub resistance properties (cured films)
- Meets EN - 71.3 Specification for heavy metals

Product Range

Available in Pantone™ Basis Colours and a specially developed 4 - colour process set

Pantone Range:

1 DPP-101 Pantone Yellow C	8 DPP-133 Pantone Purple C	15 DPP-171 Opaque White
2 DPP-102 Pantone Yellow 012C	9 DPP-141 Pantone Violet C	16 DPP-172 Opaque White (Toned)
3 DPP-111 Pantone Orange 021C	10 DPP-151 Pantone Blue 072 C	17 DPP-182 Jet Black
4 DPP-121 Pantone Warm Red C	11 DPP-152 Pantone Reflex Blue C	18 DPP-191 Mixing Clear
5 DPP-122 Pantone Red 032C	12 DPP-153 Pantone Process Blue C	19 DPP-192 Mixing Extender Base
6 DPP-131 Pantone Rubine Red C	13 DPP-161 Pantone Green C	
7 DPP-132 Pantone Rhodamine Red C	14 DPP-181 Pantone Black C	

Process Set :

DPP - 401 Process Yellow
DPP - 402 Process Magenta
DPP - 403 Process Cyan
DPP - 404 Process Black

Jet Black DPP - 182 is recommended for solid and text and line work
Pantone Black DPP - 181 is suitable for mixing as well as for process printing

Process Parameters

1. Printing Process :

Micro UV - DPP series is suitable for all rotary letter press and dry offset printing machines

2. Printing Speed and Curing Parameters

Micro UV - DPP series has fastest curing properties and it is possible to achieve speed between 60 - 120 meters / minutes with a curing unit consisting of a Medium Pressure Mercury Vapour Lamp of 120 - 150 Watts/cm. The curing speed of UV ink is much dependent on following factors :

- Release of ink (Print density)
- Substrate (absorbent/non - absorbent material)
- U. V. Lamp
- Half Tone/Solid Printing
- Printing Speed
- Color Strength

The following table shows the effect of the ink input on the printing speed.

	Process colour Printing	Full Tone Solids
Film weight	0.8 - 1.2 gm/m ²	1.5 - 1.8 gm/m ²
Printing speed	150 - 240 mtr / minutes	120 mtr / minutes
U. V. Lamps	2 UV lamps 120 Watt/cm 300 Watt/inch	2 UV lamps 120 Watt/cm 300 Watt/inch.

All above figures are valid for all colours and opaque white

Physical Properties

Micro UV - DPP series is available in press ready condition with optimal viscosity and tack

Printing Parameters :

Rollers :

EPDM (Ethylene - Propylene - Diene - Monomers) Roller are recommended for U. V. Inks

Plates and blankets :

Micro UV - DPP series can be used for the plates and blankets, which are suitable for U. V. Inks

U. V. Lamps :

Micro UV - DPP series can be well cured by the lamps of power 120 - 150 Watts/cm (300 - 400 Watts/inch). If power is increased, or if more U. V. lamps are used, the printing speed can be increased

*Keep the reflectors clean and undamaged. Unclean damaged reflectors will give a slower curing speed. Always check the bulb to see how many hours it has been in use. The bulb manufactures can give the life of bulb (total hours)

Surface Treatment for LDPE/HDPE and Polypropylene :

The use of corona/flame treatment in -line is recommended when printing on these substrates (top layer of the substrate used for Lami - Tubes as well other print applications). The surface tension must be in between 44-48 dynes/cm to achieve good adhesion

Additives :

UAX - 277 U. V. Wax Additive

Maximum 5% may be added to improve the rub resistance, can be used for D/O printing process

UAX - 278 U. V. Gel Tack Reducer

Maximum 5% may be added to improve the printability on uncoated papers; will reduce the tack but maintain the viscosity

UAX - 279 U. V. Thin Reducer

An addition of 1% will reduce the tack and viscosity of Micro UV - DPP inks

UAX - 280 U. V. Special Additive

Maximum 1% may be added for label printing to get improved slip. Can be used for D/O printing

UAX - 281 U. V. Initiator for Black and other dark colours

Maximum 2% may be added to increase the curing speed of the Micro UV - DPP inks

UAX - 282 U. V. Initiator for white and tint colours

Maximum 2% may be added to increase the curing speed of the Micro UV - DPP inks

Cleaning :

To clean roller and other equipments use 10 V 1004 09 Roller wash for cleaning. To increase the evaporation rate of 10V1004 09 use small amount of Iso Propyl Alcohol (IPA).

Over Print Varnish, for different applications are available. (Please refer to the Technical information literature for this product)

Resistance Properties of the inks

Resistance properties should be checked after 24hrs. of printing operation

Material Safety Data Sheet is available on request

Note : The Technical information sheet reflects the current state of our knowledge. This information is compiled based upon field experience and extensive laboratory testing. However, customers are requested to satisfy themselves that the products meet their requirements in all respects before starting a print run. Since the printing conditions are not under our control, no guarantee can be given for their performance.