



# UNION INKS

## Product Information

### ***UNISPEED SCREEN INKS***

### ***43-00 SERIES***

TIL NO : 501

#### PROPERTIES

Flexible, high visual impact glossy ink specifically formulated for printing onto treated polyethylene bottles, sometimes onto enamelled metal and metallised polyester sheets.

- good resistant to a wide range of products
- rapid drying giving high production yields
- good adhesion on Polyethylene with a treatment level of 46 - 48 (Union Carbide Surface Tension)
- easy printability with exceptional covering power and opacity
- excellent weathering and lightfastness (blue wool scale 7 to 8)

#### APPLICATIONS

Unispeed ink is designed for screen printing onto treated polyethylene bottles and also on enamelled metal surfaces. Requirement for resistant to petrol, bleaches and products containing alcohol, essential oils or perfumes, Unicure 48-00 Series ink is recommended.

#### SCREENS

Stencils must be solvent resistant. For fine details use 120 threads/cm fabrics, while 77 threads/cm fabrics are recommended for large areas or where higher opacity is demanded.

For screen wash-up, use Screenwash 99-SW113.

#### THINNING

- Fast Reducer: 43-T102
- Normal Reducer: 43-T104
- Slow Retarder: 43-T106

Thinning ratio varies depending on printing and drying conditions from 10 to 20% maximum.

#### PRINTING

Prior to use ink must be thoroughly stirred and thinned according to printing parameters. Printing should be off-contact with well sharpened polyurethane squeegee of average shore hardness of 70-75 shore. Soon after use clean the screen and other equipment with proper solvents.

#### DRYING

The ink dries rapidly by evaporation of solvents and can be flame or jet dried in a few seconds allowing production speed of 3000 to 4000 bottles per hour. Oven drying at 80°C can be achieved in 1 to 2 minutes. For prints at thicker at thicker film weight through 77 threads/cm, slightly longer curing time should be allowed. Full resistant of Unispeed ink is not reached until 24 hours after printing.

If faster drying is required for higher production rates, Fast Unispeed 44-00 Series is recommended.

UNISPEED SCREEN INKS ... TIL

## PRODUCT RANGE

The standard basic shades are in the SSI screen ink colour guide.

- trichromatic colours for process colour printing.
- 43-185 Extender medium to reduce unit cost of the ink.
- 43-186 Gel medium to lower shade intensity without affecting ink original physical properties.
- 43-195 Transparent medium to modify the properties of pigmented ink or as an overprint varnish.
- 43-D100 Base medium for the preparation of metallic ink.
- 43-C191 Unispeed Catalyst to be added at a level of 5 - 10% to give improved adhesion on bottles with borderline treatment levels or to improve water resistance and resistance to other products. Ink mixed with catalyst has a pot life of 24 hours.

The basic ink shades are :

CODE	COLOURS
43-P100	Primrose Yellow
43-Y100	Golden Yellow
43-S100	Scarlet
43-R100	Red
43-M100	Magenta
43-V100	Violet
43-B100	Blue
43-G100	Green
43-K100	Black
43-W100	White

## STOCK AND SURFACE TREATMENT

This ink is designed to give adhesion on pretreated polyethylene. Untreated polyethylene has an inert surface which does not give ink adhesion. To render the surface ink receptive and to ensure good ink adhesion, it must be activated by flame treatment. It is recommended that printing is carried out as soon as possible after flaming. It is emphasized that while chemical methods such as methylene blue/nitroethane may give an indication of whether or not a bottle has been treated, they do not necessarily show whether the treatment is satisfactory. The most successful method of assessing treatment level is by the Union Carbide Wetting Tension Test. However, a variety of additives are included in the polymer and on some occasions, these may have a detrimental effect on ink adhesion. The only reliable test is to make a print and assess adhesion both immediately after printing and after storage.

It has been established that for a given ink, there is an optimum level of treatment that gives maximum adhesion and product resistance. Over flaming can result in print with good adhesion but little or no product resistance. This optimum level should be established to suit the printer's particular conditions. The use of treatment level for all ink will not necessarily give the best results in all circumstances.

## PRECAUTIONS FOR USE AND STORAGE

This material is not hazardous when used with a reasonable standard of hygiene and safe working practice. However, as with all chemicals, skin contact should be avoided and any contamination must be washed with plenty of water. In case of eye contamination, irrigate with plenty of water and seek medical advice. Store product in a cool place and shelf life is about 12 months at 25 degrees C .

## WARNING

These information are given in good faith, but without any guarantee as the printing conditions of our inks are beyond our control. In the event of complaints, the ink supplier may replace free of charge the unused ink, declining any other responsibilities.