

# Ultraset UVOS



**UV-curable 4-colour process shades for waterless offset printing**

**Press-ready, high pigmentation, very fast curing of the ink, suited for high printing speeds**

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## Field of Application

Ultraset UVOS is a UV-curable and waterless offset ink suitable for printing onto all optical disc formats; CDs and DVDs, DVD-R, DVD-RW, Blu-ray, as well as surfaces pre-printed with white. Since the pre-printed opaque whites are subject to a certain post-curing, overprinting with Ultraset UVOS should generally be carried out as soon as possible.

All UVOS shades can be processed on modern screen/offset printing combination presses either following the 'wet-on-wet' or 'wet-on-dry' concept.

Since all the print substrates mentioned may be different in printability even within an individual type, preliminary trials are essential to determine the suitability for the intended use.

## Characteristics

Ultraset UVOS colour shades are very transparent/brilliant with satin gloss. By using these 4-colour process shades, it is possible to achieve strong and vivid colours at a lowest possible ink deposit.

UVOS further excels with excellent adhesion and scratch resistance, its trouble-free ink transfer, as well as to its very stable ink viscosity during printing. It is suited for extremely high production speeds of up to 135 sequences/ min.

Further characteristics:

	425	435	455	485
<b>Pigment quality</b>				
Blue wool scale	5	5	8	8
<b>Resistance:</b>				
Alcohol	+	+	+	+
Alkali	+	+	+	+

	429	439	459	489
<b>Pigment quality</b>				
Blue wool scale	5	5	8	8
<b>Resistance:</b>				
Alcohol	+	+	+	-
Alkali	+	-	+	+

## Drying

Ultraset UVOS is a fast curing UV offset ink. A UV curing unit with 2 medium-pressure mercury lamps (150-200 W/cm) cures UVOS. The curing speed of the ink is generally dependent upon the kind of UV-curing unit (reflectors), number, age, and power of the UV-lamps, the printed ink film thickness, colour shade, substrate in use, as well as the printing speed.

## Range

### 4-Colour Process Shades Standard

425	Process Yellow
435	Process Magenta
455	Process Cyan
485	Process Black

### 4-Colour Process Shades Special

429	Process Yellow
439	Process Magenta
459	Process Cyan
489	Process Black

**4-Colour Process Shades Standard:** High density and higher viscosity, suited for offset printing machines and "wet-on-wet" printing

**4-Colour Process Shades Special:** Rheology and lower viscosity, suited for Kammann offset printing machines (K15-40 and K15-40HS)

### Opaque whites for rotary printing

For rotary screen or flexo printing we recommend Ultrastar UVS 170 Opaque White. Please refer to the Technical Data Sheet Ultrastar UVS for further details.

## Opaque whites for flat bed printing

Prior to printing the offset 4-colour process shades, a full-area pre-print with an opaque white is standard procedure. We recommend the different Ultradisc UVOD opaque whites, all highly reactive at best possible degree of white.

For the coating of offset and 4-colour process screen prints we recommend the high-gloss varnish UVOD 912.

Please refer to the Technical Data Sheet Ultradisc UVOD for further details.

## Printing Parameters

- Waterless offset printing with the 'wet-on-dry' method (e.g. Kammann K15-40) requires constant processing temperatures between 13° C and 15° C. This is the only way to guarantee the right viscosity necessary to counteract a possible toning of the ink.
- For wet-on-wet printing with a short ink system (e.g. Metronic CD Printer), we recommend a temperature adjustment of 20-40° C.
- For Asian offset machines (e.g. Hanky, Lamin or Gyann Way), the recommended room temperature is max. 27° C and the temperature of the plates should be between 14° C and 17° C.
- An exact adjustment of the printing cylinder is of further importance. This means that e.g. processing errors within the printing unit must be avoided as otherwise they are possible to lead to an higher number of milling processes, to an increase in temperature of the printing ink, as well as to an additional wear of the plate. All this can give rise to a toning.
- The compressive strain between plate and rubber blanket cylinder must be kept low so that the mechanically sensitive printing plate is not damaged. An excessive incidence of light, long interruptions, and frequent washings may also deteriorate the printing plate again leading to a toning.

## Shelf Life

Shelf life depends very much on the formula/ reactivity of the ink system as well as the storage temperature.

It is 18 months for an unopened ink container if stored in a dark room at a temperature of 15-25°C. Under different conditions (particularly higher storage temperatures), shelf life will be reduced. In such cases, Marabu's warranty expires.

## Note

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application.

You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, they shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.

## Labelling

For our ink type Ultraset UVOS and its additives and auxiliaries there are current Material Safety Data Sheets according to EC-regulation 1907/2006 informing in detail about all relevant safety data including labelling according to the present EEC regulations as to health and safety labelling requirements. Such health and safety data may also be derived from the respective label.

## Safety rules for UV screen printing inks

UV-inks contain some substances which may irritate the skin. Therefore, we recommend to take utmost care when working with UV-curable screen printing inks. Parts of the skin dirtied with ink are to be cleaned immediately with water and soap. Please pay also attention to the notes on labels and safety data sheets.

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