

### 1. APPLICATIONS FIELDS:

Especially designed dry offset inks for the printing onto cups and foils made of Polypropylene (PE/PP) and polystyrene.

Substrates may differ in their chemical structure or method of manufacture. A test for suitability must always be carried out before printing. Antistatic, Mould Release Agents and Slip Additives may have negative effects on adhesion, and should be detected and removed prior to printing.

### 2. CHARACTERISTICS:

The highly reactive UV dry offset printing inks of series 060 UV show high abrasion resistance properties and are formulated for high machine speeds. Due to its high colour intensity of ink series 060 UV it is possible to print with reduced ink film layers. A special product test is recommended prior to production.

The inks of the 060 UV series are constitutionally free from toxic elements and solvents. The raw materials used meet with the limits stipulated by the EEC regulation EN 71 (Safety of Toys), part 3 (Migration of Certain Elements) of December 1994.

### 3. RANGE OF COLOURS:

#### 3.1 Basic Colours:

Yellow	M 01	060 UV 2075
Yellow	M 02	060 UV 2074
Warm red	M 04	060 UV 3178
Rubine red	M 05	060 UV 3180
Rhodamine red	M 06	060 UV 3181
Violet	M 07	060 UV 5161
Reflex blue	M 08	060 UV 5162
Blue	M 09	060 UV 5163
Green	M 10	060 UV 6087
White	M 11	060 UV 1015
Black	M 12	060 UV 9021
Clear Base		060 UV 0040

#### 3.2 High Opacity Formulations:

White	(high opacity)	060 UV 1006
Black	(high opacity)	060 UV 9029

### 4. ADDITIVES:

#### 4.1 Thinner:

The inks of the 060 UV series are ready to use. If further viscosity reduction is desired, an UV thinner may be added. To avoid toning, the addition should only be a few percent.

UV Thinner (max. addition: 1 - 3%) 060 UV 0014

#### 4.2 Raster Paste:

Raster Paste can be added to reduce "Dot Gain" and to achieve sharper dots.

Raster Paste (addition max. 10%) 060 UV 0025

### 5. PROCESSING INSTRUCTIONS:

#### 5.1 Pre-treatment:

Pre-treatment of polyolefines (PE/PP) must be performed by CORONA-discharge in order to insure the adhesion of the UV screen printing ink to the substrate. In case of PE, surface tension needs to be at least 42 mN/m (Dynes/cm), in case of PP at least 52 mN/m (Dynes/cm).

#### 5.2 Curing Conditions:

The varying UV absorption of the individual colours results in a range of curing properties depending on colour and opacity. All colours of the 060 UV series can be cured by the use of medium pressure mercury vapour lamps (at 120 - 160 W/cm).

The optimum energy output is 250 - 300 Millijoule/cm<sup>2</sup>. UV curing is followed by a 12 hour post-cure phase after which the ink film is fully cured and has its final properties.

However, it must be noted, that low radiation intensity, excessive machine speeds or excessive film thickness can have a negative influence on the curing properties and adhesion.

Un-cured prints are considered a hazardous waste. Therefore, it is recommended to cure misprints under the UV lamp as a matter of principle. After curing, spoilage can be disposed by conventional methods and may be incinerated without causing any difficulties.

# 060 UV SERIES

## 6. CLEANING:

Clichés can be cleaned with the plate cleaner 35352 and the rollers of the ink fountains should be cleaned with the roller cleaner 34622. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn. Cleaning liquids that are contaminated with UV products should not be used for the washing of working materials that were used with conventional screen printing inks. Solvents that contain UV residue are not suitable for reclamation and must be treated as a separate waste.

Plate cleaner	35352
Roller cleaner	34622

## 7. SHELF LIFE:

A shelf life of 12 months is guaranteed when storing the inks at 21°C and in the original packing container. At higher storage temperatures the shelf life will be reduced.

## 8. PRECAUTIONS:

UV inks may cause irritations and can increase the sensitivity of the skin, possibly leading to hypersensitivity. Therefore, the use of disposable gloves and protective goggles is strongly recommended.

For further information on the safety, storage and environmental aspects concerning these products please refer to the Material Safety Data Sheet (MSDS).

Additional technical information may be obtained from our staff of the Technical Application Department.

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