



# UV LED Screen Ink for Bottles 3288

## Technical Data Sheet

Page 1/2

Smiley 3288 is a two component UV screen printing ink for bottles such as drinking bottles, cosmetic bottles, etc.

- Excellent adhesion
- Very high scratch resistance
- Excellent alkaline, chemical and dish washer resistance

### Substrates:

- Flame pre-treated, cold-end coated glass, e.g. drinking bottles
- Pre-treated cosmetic bottles
- Pre-treated glass, e.g. drinking glass

Note: For a good adhesion, a uniform surface tension of the substrate with 44 Dyne/cm<sup>2</sup> is generally important. Furthermore, the glass surface must absolutely be free from graphite, silicone, dust or residues like grease or similar (e.g. fingerprints).

### USER INFORMATION

#### Mesh:

We recommend to use mesh sizes between 355-34 and 420-34 Mesh per cm. High ink layers may result in curing problems and therefore require more UV energy. Only after proper UV curing the inks achieve the desired characteristics with regard to adhesion and resistance.

#### Stencil:

Emulsion Recommended:  
6060-216 Dual Cure Graphic Emulsion

#### Squeegee:

80-85 durometer hardness polyurethane squeegees.

#### Pre-Production Test:

Always pretest adhesion and application before each production run, as there can often be significant differences between substrates from different manufacturers and even between different batches of substrates. Pretest to determine optimum printing performance for a particular set of ink, substrate, screen, press, and drying variables/conditions.

#### Flame Pre-Treatment:

Many glass sheets are coated in order to improve the scratch resistance. Therefore, to achieve good ink adhesion onto glass, a flame pre-treatment of the glass surface is necessary.

A pre-treatment of the glass by flaming immediately before printing will generally enhance the adhesion of the ink to the substrate.

#### Printing:

Maintain ink temperature at 65°- 90°F (18°- 32°C) for optimum print performance

Lower temperatures increase the ink viscosity, impairing both flow and drying.

Elevated temperatures lower the ink viscosity, reducing print definition and film thickness.

- 3288-968 = Leveling Agent can be added 0.5% - 1.0% to improve the ink film smoothness
- 3288-969 = Anti-Foaming Agent can be added 0.5% - 1.0% to prevent the air bubble when printing at fast speed

Overprintability:

To achieve good intermediate adhesion, the inks are printed immediately one after the other in one machine run if possible.

#### Curing:

3288 Series cures when exposed to a UV LED curing unit

- 16 watts/cm<sup>2</sup>
- 395 nanometers wavelength
- Less than 4mm distance from substrate to cure unit
- Belt speed at or less than 10-15m/min depending on color
- If the ink cure insufficiently, reactivity can be increased with addition of liquid photo initiator solution 3288-6049 (addition 3-5%). However, if the ink deposit is too high or UV energy clearly too low, an addition of photo initiator won't lead to a further curing improvement and inks will tend to build wrinkles and become tacky.

Note: UV curing resistance tests shouldn't start before a period of 24-72 hours.

# UV LED Screen Ink for Bottles 3288

## Technical Data Sheet

Page 2/2

### Catalyst/ Hardener Mixing:

- Combine 4% of Hardener 3288-94005 to 3288 ink.
- The pot life of 3288 ink after mixing with 3288-94005 Hardener is approximate 7-9 hours.

### Thinner & Wash-up:

- For fast running printing machines viscosity of the inks can be adjusted with UV Dilute 3288-M1664P. Viscosity can be reduced (addition 5 – max. 10%).
- Wash-up: Use 4050-001 Screen Wash and Cleaner.

### GENERAL INFORMATION

#### Handling & Storage:

- **Smiley 3288** is formulated free of lead and other heavy metals
- It is recommended to wear suitable protective gear such as glasses and gloves. Take particular care to avoid splashes into the eyes and skin contact. . If the ink comes in contact with skin, wash with soap and plenty of water. If ink comes in contact with eyes, wash with plenty of water and consult with a doctor.
- Comprehensive information on the safety and handling of Smiley 3288 screen inks and thinners is given in the appropriate Smiley Material Safety Data Sheet (MSDS), which are available upon request.
- Store tightly covered at temperatures between (18° - 25°C). Can be stored for 1 year under these conditions.
- Tins should be kept tightly closed when not in use.

#### Environmental Information:

- Do not contain ozone depleting chemicals.
- UV LED Screen Ink for Bottles 3288 should be disposed properly (see MSDS) and in accordance to local regulations to avoid contamination.

#### Recommended Stencil

#### Making Products:

- Screen Preparation
  - Mesh Preparation 6050-300 – for abrasion
  - Mesh Degreaser 6050-200 – for degreasing
- Screen Emulsion
  - Dual Cure Graphic Emulsion 6060-216
- Screen Cleaning
  - Ghost Remover 6070-100
  - Stain Remover 6070-001
- Screen Reclaiming
  - Stripping Powder 6070-200

### PRODUCT OFFERING

#### Packaging:

**3288 is available in 1 Kilo, 5 Kilos and 20 Kilos containers.**

#### Standard Colours:

3288-001	Black
3288-010	Tinting Black
3288-021	White
3288-030	Tinting White
3288-064	Yellow (GS)
3288-066	Mid Chrome/Yellow (RS)
3288-114	Orange
3288-127	Violet
3288-164	Red (BS)
3288-191	Vermillion/Red (YS)
3288-230	Blue
3288-325	Green
3288-383	Extender Base

### ADDITIONAL INFORMATION

For additional product information, please visit our website at <http://www.smiley.co.th>.  
For further information, please contact SPS personnel at [medhi@smiley.co.th](mailto:medhi@smiley.co.th) or [joy@smiley.co.th](mailto:joy@smiley.co.th).

Thank you for choosing **SMILEY**.

Smiley Printing Solution Co., Ltd. (SPS), abides by the quality of this product. The information and recommendations that embody this Technical Data Sheet along with the technical advice are based solely on our knowledge and therefore confident to be precise. This product has been specifically formulated for screen printing. SPS cannot guarantee the precision for other possible application for the reason that manufacturing methods and other materials vary. Any liability amalgamated with the use and application of these products, users are the sole bearer of responsibility for choosing appropriate product for end-users' requirement. This Technical Data Sheet is provided for the technical purpose in the usage of this product and users are expected to follow current recommendation.