



UV LED Screen Inks for Plastic Sheet & Inlay RFID 3285

Technical Data Sheet

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Smiley 3285 is formulated to cure using a UV LED output source with primary wavelength of 395 nanometers. This ink is designed for a wide range of substrates used for labeling and advertising. The use of UV LED curing systems rather than traditional mercury vapor curing units reduces energy costs, reduces heat within the curing process, and provides significantly longer lamp life.

- Excellent adhesion
- Good opacity
- Resistant to variety of organic solvents

Substrates:

- Styrene
- Most rigid and flexible vinyl
- Static cling vinyl
- Rigid and flexible treated polyethylene
- Rigid and flexible treated polypropylene
- Treated fluted polypropylene
- PETG, Coated paper, Coated card stock
- Some acrylic

USER INFORMATION

Mesh:

We recommend to use mesh sizes between 150-31 and 120-34 Mesh per cm. High ink layers may result in curing problems and therefore require more UV energy. Only after proper UV LED curing the inks achieve the desired characteristics with regard to adhesion and resistance.

Stencil:

Emulsion Recommended:
6060-216 Dual Cure Graphic Emulsion

Squeegee:

80-90 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.

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.

Overprintability:

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

Curing:

3285 Series cures when exposed to a UV LED curing unit

- 4 watts/cm² or higher cure unit
- 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 3285-6049 (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 LED curing resistance tests shouldn't start before a period of 24-72 hour.



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Thinner & Wash-up:

- For fast running printing machines viscosity of the inks can be adjusted with UV thinner 3285-0564. Viscosity can be reduced (addition 5 – max. 10%).
- Wash-up: Use 4050-001 Screen Wash and Cleaner.

GENERAL INFORMATION

Handling & Storage:

- **Smiley 3285** 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 3285 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 Plastic Substrates 3285 should be disposed properly (see MSDS) and in accordance 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:

3285 is available in 1 Kilo, 5 Kilos and 20 Kilos containers.

Standard Colours:

- 3285-001 Black
- 3285-010 Tinting Black
- 3285-021 White
- 3285-030 Tinting White
- 3285-064 Yellow (GS)
- 3285-066 Mid Chrome/Yellow (RS)
- 3285-114 Orange
- 3285-127 Violet
- 3285-164 Red (BS)
- 3285-191 Vermillion/Red (YS)
- 3285-230 Blue
- 3285-325 Green
- 3285-383 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 or 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.