

# Gloss PVC Ink 3000 Screen Ink for Plastics

## Technical Data Sheet

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**Smiley 3000** is a system of inks designed for printing onto wide range of flexible and rigid plastics. Overprint Varnish 3000-401, 3000-403 & 3000-404 for overprinting onto the Gloss PVC Inks 3000 and other suitable inks where optimum chemical and mechanical resistance is required.

- High Gloss finish
- Safe, Low temperature jet drying
- Good Flexibility (suitable for vacuum forming)
- Light and Weather resistant
- Good opacity
- Excellent screen stability and self-solvency
- Good petrol resistance (excellent when overprinted with 3000-401)

### Overprint Varnishes:

- 3000-383 Gloss Retention Overprint Varnish - For more glossy appearance
- 3000-401 Alcohol/Petrol Resistant Overprint Varnish - recommended if exceptionally high resistance to petrol is required. However it should not be used for prolonged outdoor exposure in excess of 2 years.
- 3000-403 Weather Resistant Overprint Varnish - recommended for outdoor durability greater than 2 years.
- 3000-404 2-Pack Overprint Varnish - High gloss and good chemical resistance
- 3251-001 UV Curing Overprint Varnish - High gloss, fast cure, wide adhesion range and good chemical resistant

**Substrates:** Plastics, PVC, ABS, Acrylics, Coated Polyester, CAB, 'Hi-S Cal', 'Scotchcal', Cellulose Acetate

## USER INFORMATION

**Mesh:** 100-40 & 120-34 Mesh/cm monofilament polyesters are recommended for most applications.

**Stencil:** Solvent resistant emulsions  
Recommended:  
6060-216 Dual Cure Graphic Emulsion

**Squeegee:** 70-75 durometer hardness polyurethane squeegees.

**Coverage:** 70-80 M<sup>2</sup>/Kilo (120 Mesh/cm) depending upon ink deposit.

**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 drying performance. Lower temperatures increase the ink viscosity, impairing both flow and drying. Elevated temperatures lower the ink viscosity, reducing print definition and film thickness.

**Drying / Curing:** Drying - Can be jet-dried at 55-65°C in 15-20 seconds. 65°C for 20-25 seconds when overprinted with Overprint Varnish 3000-401. Can be dried at the normal room temperature within about 10 minutes, depending on the substrate type and ambient temperature. The most appropriate stoving schedule must be assessed before commencing a full production run.

- Maximum adhesion and chemical resistant is achieved after 5-7 days
- Drying and adhesion of ink is affected by:-
  - Drying temperature
  - Drying time
  - Grade and type of the substrate
  - Treatment degree of substrate

**Thinning and Wash-up:** Retarder: Use 4030-001 Retarder to slow down the drying time. Add up to 10-15% by weight.  
Wash-up: Use 4050-003 Screen Wash and Cleaner.

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### GENERAL INFORMATION

#### Handling & Storage:

- Smiley 3000 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 3000 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.
- Gloss PVC Ink 3000 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
  - One Pot Graphic Emulsion 6060-401
- Screen Cleaning
  - Ghost Remover 6070-100
  - Stain Remover 6070-001
- Screen Reclaiming
  - Stripping Powder 6070-200

### PRODUCT OFFERING:

#### Packaging:

3000 is available in 1 Kilo, 5 Kilos and 20 Kilos containers.

### 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).

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.