



UV LED Screen Ink for Glass Sheets 3292

Technical Data Sheet

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Smiley 3292 is a two component UV screen printing ink for glass sheets such as laptop, mobile phone windows.

- Excellent adhesion
- Very high scratch resistance
- Excellent chemical resistance

Substrates: - Glass sheets

Note: For a good adhesion, a uniform surface tension of the substrate with 44 Dyne/cm² 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.

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

Curing: 3292 Series cures when exposed to a UV LED curing unit

- 16 watts/cm²
- 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 3292-6049 (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.



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Catalyst/ Hardener Mixing:

- Combine 4% of Hardener 3292-387A9 to 3292 ink.
- Approximate pot life of ink will be 5-7 hours.
- Add only enough ink to the screen to be able to print for 5-10 minutes
- Add additional ink in small increments throughout the print run to maintain screen stability.

Thinner & Wash-up:

- For fast running printing machines viscosity of the inks can be adjusted with UV thinner 3292-0564. Viscosity can be reduced (addition 5 – max. 10%).
- Wash-up: Use 4050-001 Screen Wash and Cleaner.

GENERAL INFORMATION

Handling & Storage:

- **Smiley 3292** 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 3292 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 3292 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:

3292 is available in 1 Kilo, 5 Kilos and 20 Kilos containers.

Standard Colours:

| | |
|----------|------------------------|
| 3292-001 | Black |
| 3292-010 | Tinting Black |
| 3292-021 | White |
| 3292-030 | Tinting White |
| 3292-064 | Yellow (GS) |
| 3292-066 | Mid Chrome/Yellow (RS) |
| 3292-114 | Orange |
| 3292-127 | Violet |
| 3292-164 | Red (BS) |
| 3292-191 | Vermillion/Red (YS) |
| 3292-230 | Blue |
| 3292-325 | Green |
| 3292-383 | 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**.