



## Special Tube Varnish 3280-384

### Technical Data Sheet

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Smiley 3280-384 Special Tube Varnish is a glossy UV cured roller coating varnish for the over varnishing of pre-treated polyolefin tubes printed with suitable offset inks.

#### Important:

Stir well before every use. Full intercoat adhesion may not fully develop until 24 hours after coating and compatibility of combined systems must be evaluated under actual production conditions before commencing a production run.

#### Applications:

3280-384 is formulated to over-varnish compatible offset printed inks .

Note: Some pigments used in offset inks can bleed or change colour in contact with UV curing varnish and although 3280-384 is formulated to minimize this effect, care should be taken to avoid inks of this type.

#### Pre-Production Test:

Always test the application fully before beginning a production run, as supposedly similar plastics can vary between different manufacturers and also between different batches. Certain plastics may be impregnated with lubricants and anti-static additives which, like migrating plasticizers, may impair adhesion even a considerable time after printing.

#### Pre-treatment:

Polyethylene must be flame or corona discharge pre-treated in order to improve the wetting properties and adhesion of the varnish. A treatment level of 52-58 dynes/cm is recommended.

#### Coating:

3280-384 varnish is designed for coating on conventional roller-coating machines. The varnish must be fully stirred before use and is designed to be used straight from the container. Viscosity can be adjusted by gently heating the varnish in the range of 20-35°C.

The recommended film weight is 4gsm, although a film weight in the range of 3-8gsm can be used

#### Curing:

3280-384 cures when exposed to a UV LED curing unit

- 16 watts/cm<sup>2</sup> 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 3280-6049 (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.

#### Metallic Foil Blocking:

3280-384 can be in-line hot foil blocked with suitable blocking foils. However, the foil should be carefully selected for this application.

#### Product Resistance:

3280-384 should resist attack by most products likely to be packed in a printed container.

Resistance of prints immediately after cure is excellent but for best results, it is advisable to allow at least 24 hours after curing to achieve optimum resistance.

3280-384 varnish is not recommended for applications where outdoor exposure of prints is a possibility.



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#### GENERAL INFORMATION

##### Handling & Storage:

- **Smiley 3280-384** 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 varnish comes in contact with skin, wash with soap and plenty of water. If varnish comes in contact with eyes, wash with plenty of water and consult with a doctor.
- Comprehensive information on the safety and handling of Smiley 3280-384 varnish 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:

- Special Tube Varnish 3280-384 should be disposed properly (see MSDS) and in accordance to local regulations to avoid contamination.

#### PRODUCT OFFERING

##### Packaging:

**3280-384 is available in 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) or [joy@smiley.co.th](mailto:joy@smiley.co.th).  
Thank you for choosing **SMILEY**.

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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.

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