

# TECHNICAL INFORMATION

## LustReflex screen-printable hi-reflective coatings

### TLU 0050A, reflective mirror coating

#### 1.0 Product Description

**LustReflex** TLU 0050A is designed for direct screen-printing and is supplied in paste form. The product can be used to create a homogeneous, color neutral, partially transparent mirror coating on glass or ceramic articles. Using this material, combined with available application and furnace technology, it is possible to produce full or fine patterned prints, with good durability, on the various substrates.

It can be applied on both flat and holloware glass items for use in a wide range of market segments.

#### 2.0 Product Benefits

- The low odour paste is water-friendly and printing devices can be easily cleaned
- With this coating it is easy to print special designs, large areas and also the entire surface area of the glass edge-to-edge.
- After firing, the coating creates a homogeneous, silver-shade 'mirror-like' surface. Compared to bare glass, the reflectivity of the treated surface is increased by about 12 % in the visible and about 30 % in the UV
- The coating is chemically resistant to 10 % NaOH, 1N H<sub>2</sub>SO<sub>4</sub>, 3 % HCl and 10 % citric acid, during 2 hour immersion tests at room temperature. The coating is also resistant to boiling water for at least 2 hours.
- The mechanical resistance is comparable to soda-lime glass
- Flat glass coated with **LustReflex** TLU 0050A can be printed on the second surface and re-fired with the **LustReflex** coated side in contact with the tempered furnace rollers, thereby creating a wide range of interesting design effects

#### 3.0 Product Characteristics

<b>3.1 Physical Properties</b>	
Appearance	Smooth, red colored paste
Volatile Organic Compounds (VOC's)	92 % +/- 2 %
Flash Point	>93 °C (200 °F)
Drying Rate	Slow
Dried Film Strength	Not sticking
<b>3.2 Recommended Application Parameters</b>	
Application Method	Direct Screen Printing
Screen Mesh	300 mesh per inch, or higher
Wet Film Thickness	< 15 microns
Thinning	Not recommended
Printing Viscosity	Between 0,8 and 1,4 Pas at 200 s <sup>-1</sup>

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<b>3.3 Curing/Drying Recommendation</b>	
<b>Drying Method</b>	Forced drying with common infrared or convection drier
<b>Drying Parameters</b>	120 °C (248 °F) to 150 °C (302 °F) for 5 - 10 mins.
<b>3.4 Firing Recommendation</b>	
<b>Tempering Method</b>	Standard tempering furnaces for flat glass. Common furnace types used in hollow-glass and ceramic industry
<b>Recommended Starting Point for Settings</b>	From 540 °C (1000 °F) and higher

### 4.0 Product Preparation

Product is delivered ready-to-use, set up at the required printing viscosity. Product viscosity is determined by a BOHLIN INSTRUMENTS unit, using system CP 1 ° / 50 mm at 23 °C / 74 °F.

Thinning is not recommended. If a thinner is necessary for minor adjustments, please contact our Tech Service for advice and support.

Ensure that the product has been well mixed prior to use, as settling may occur during storage. We recommend pneumatic or electric stirrers. After homogenisation, assure temperature equilibrium is reached before measuring viscosity or starting application at the printing station.

### 5.0 Shelf Life and Storage Conditions

Product must be stored in a cool and dry environment. The storage temperature should not be below 5 °C (41 °F) and not exceed 25 °C (77 °F). Partly used containers must be tightly sealed after use.

We guarantee a shelf life of six months when stored in original closed containers and at conditions recommended.

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