

# TechniFlex LCL 1000F

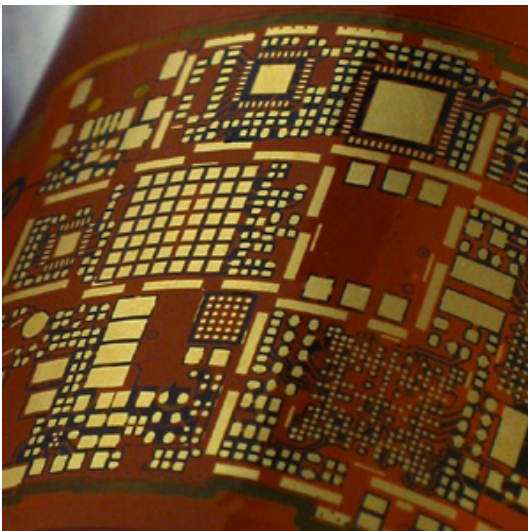
*The world is no longer flat*



# TechniFlex LCL 1000F



- **Passes UL 94V-0 & NASA Outgassing Specifications**
- **2 mil Resolution for Today's Most Advanced Technologies**
- **Easily Passes Industry Flexibility Testing (Over 10,000x)**
- **Halogen Free and RoHS Compliant**
- **Excellent Copper, FR4 and Polyimide Adhesion**
- **Excellent resolution, exceeding capabilities of polyimide coverlay film**
- **Exceeds industry requirements**

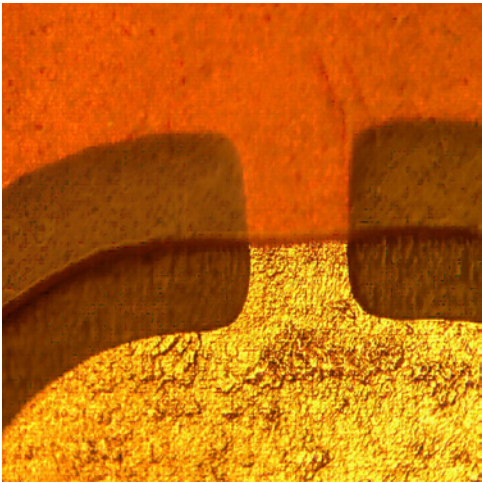
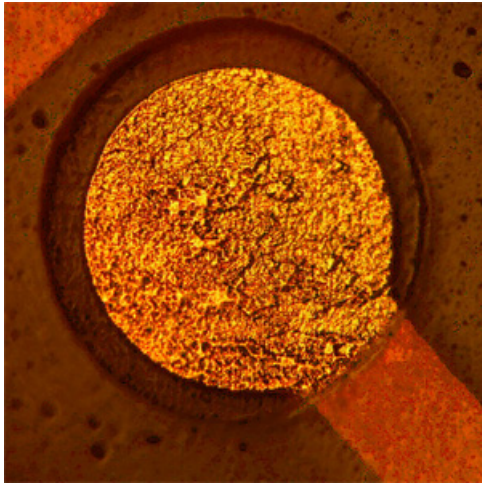


**TechniFlex LCL 1000F** is a liquid photoimagable coverlay/solder mask material, specifically engineered for rigid-flexible and flexible circuits. It is halogen free and meets RoHS, UL 94-V0, and NASA outgassing specifications. The superior flexibility and excellent resolution from the TechniFlex LCL 1000F makes it a cost effective substitute for polyimide coverlay, especially for fine features.

TechniFlex LCL is supplied as a screen printable material in amber, green gloss or black. Other colors are available upon request.

**Resolution:** TechniFlex LCL 1000F is a liquid photo-imagable epoxy based material that will produces 2 mil dams and features with straight sidewalls on copper, FR4 or polyimide. The product yields a consistent

conformal coating over design features, with excellent clearance of areas with tight registration. TechniFlex LCL 1000F makes it possible to produce advanced designs that were not possible with polyimide based coverlay films.



**Application:** TechniFlex LCL 1000F is applied like solder mask, utilizing manual or automatic screen printing equipment. The product is supplied as a two-component material that, after mixing, has a 3-day shelf life. This yields long screen life, reducing defects from plugged screens. The TechniFlex LCL 1000F formula provides a wide process window for clear development of fine features.

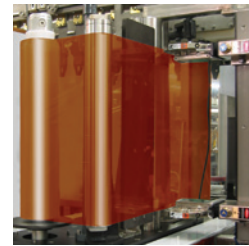
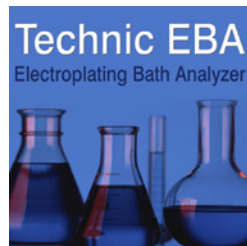
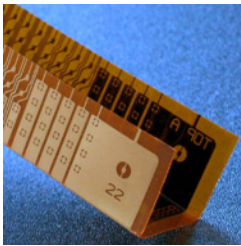
### Application Data

<b>Mixing Ratio</b>	TechniFlex LCL 1000F: 800g TechniFlex CAT 1000F: 200g
<b>Solid Contents</b>	72.8% (TechniFlex LCL 1000F) 75.2% (TechniFlex CAT 1000F) 73.3% (Mixed 1000F & CAT)
<b>Viscosity</b>	170-230ps at 25°C by VT-04
<b>Shelf Life</b>	6 Months (Prior to mixing, under ambient conditions) 9 Months (Prior to mixing, under refrigeration) 3 Days (After mixing)

**Industry Requirements:** TechniFlex LCL 1000F provides superior flexibility and excellent adhesion on copper, FR4 and polyimide. TechniFlex is a halogen free material and meets all global RoHS and EEE requirements. TechniFlex meets or exceeds IPC SM 840C, Bellcore TR-NWT-000078 and MIL P55110D specifications and exceeds competitive products by meeting the most severe industry requirements.

### Film Properties

<b>5% weight loss temperature</b>	326°C (620°F) by TMA
<b>Decomposition temperature</b>	420°C (788°F)/Primary, 620°C (1148°F)/Secondary by TMA
<b>Solvents resistance</b>	No blistering and swelling for IPA, Acetone, 1, 1, 1-trichloroethane, MEK at ambient condition/1 hour immersion
<b>Chemical resistance</b>	No blistering and swelling for 10% H2SO4, 10% HCl, 10% NaOH at ambient condition/1 hour immersion
<b>Boiling water resistance</b>	No blistering and swelling for boiling water/1 hour immersion
<b>ENIG resistance</b>	No discoloration and blistering
<b>Flexibility</b>	No cracking after 10,000 times at 180° bending with 1/16 inch mandrel after thermal curing and wave soldering
<b>Soldering resistance</b>	No peeling/blistering and whitening after 3 x 10 seconds floating on molten solder at 258°C (500°F) with no clean flux and 3 x10 seconds dipping in molton solder at 258°C (500°F) with HASL flux
<b>Water absorption</b>	0.414% after 85°C/85%RH for 4 hours
<b>Elongation</b>	15% average in Bulge Testing



- Technic Electroplating Bath Analyzer (EBA) for process control
- Low stress high speed Copper chemistry
- Continuous roll to roll processing equipment
- Metallization of flexible substrates

Technic offers a full range of advanced electroplating products and equipment for flexible circuit manufacturing. Our products are carefully engineered for high throw, high speed and developed to meet the specific physical properties, characteristics and current demands of each industry.



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