

PixMicro™ Formulations

Pixelligent solvent-free PixMicro™ formulations are ready-to-use, one-component nanocomposite materials with fast UV cure. Incorporating Pixelligent's PixClear® ZrO₂, TiO₂, and PixCor® nanocrystals, these formulations offer a wide range of refractive index values while maintaining high transparency and low haze under a broad range of film thicknesses. The solvent-free PixMicro™ formulations are versatile materials that can be applied to many substrates by dispensing, roll-coating, spin-coating, Meyer rod/bar-coating, and slot-die coating techniques for subsequent applications such as imprinting.

Formulation	Refractive Index (589 nm)	AVG Viscosity (cP)	Key Benefit
PixMicro™ Z66	1.66	600	Reduced curl/shrinkage at 30 um film thickness
PixMicro™ Z71	1.71	750	Highest RI ZrO ₂ formulation
PixMicro™ CS80	1.80	1150	Good UV stability ^(a)
PixMicro™ T84	1.84	650	Highest RI solvent-free formulation

^(a) QUV, 0.89 W/m², 340 nm

General Product Information

Benefits

- One component
- Fast UV cure
- No thermal processing steps required
- Long pot life and stored at room temperature

Key Features

- Refractive index values from 1.65 to 1.85 at 589 nm
- Viscosities less than 2000 cP
- Typical film thicknesses range from 3 to 50 μm
- %Haze < 0.2% and %Transmittance >90% at 11 μm

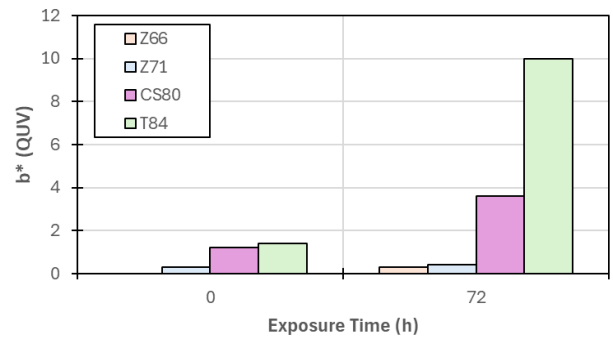
Applications

- Optical coatings
- Extended Reality
- Micro-optics
- Sensors

Suitable Substrates

- Glass
- Silicon wafer
- Plastic

QUV Reliability Data for PixMicro™ Formulations



Micro-imprinted PixMicro™ Z71 lenses (0.5-mm diameter)

