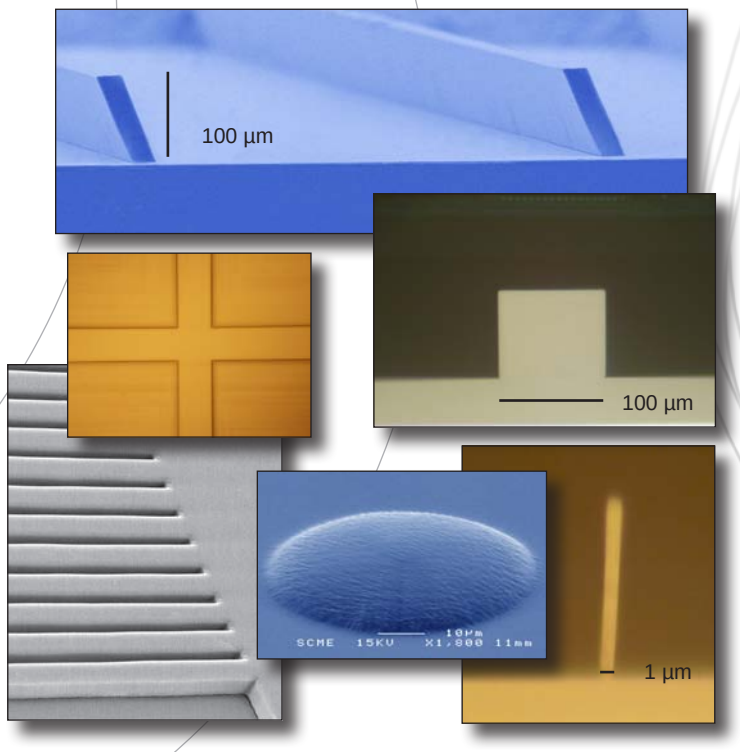
K-CL

Negative Laser Lithography Resins

These photoresists were developed by the Kloé materials department and are specifically intended for use in photolithography and microstructure lithographic applications. These resins are synthesized via a sol-gel process using organo-mineral precursors, which yields a structure of overlapping organic and mineral networks. The organic groups confer compliance and photosensitive properties to the layer, while the mineral portion contributes to the mechanical and thermal stability of the layer.
In addition, these photoresists offer a great flexibility of use. Layers can be deposited by spin, dip or spray-coating techniques onto a range of substrate materials such as glass, semi-conductor, metal, polymer and more. Furthermore, the thickness of the deposited resin layer can be adjusted from a few hundred nanometers to 100 microns, while still yielding high resolution lithography on large and small surfaces.

Properties

Composition	Hybrid sol-gel, material based on methacrylate
Viscosity	Between 25 and 100 cP at 20°C
Layer thicknesses (one pass)	Between 500 nm and 100 µm
Form factor	Up to 10
Photopolymerization sensitivity (UV)	From 325 to 405 nm
Refractive index (at 633 nm)	Between ~1.525 and ~1.540
Thermal resistance	Up to 100°C
Mechanical resistance	RIE, DRIE, Plasma etching compatible
Development	Alcoholic solution



Storage

Shelf life : 6 months if stored at -15°C
K-CL resins should be kept in tightly sealed containers and in a properly vented storage area, away from heat, strong oxidants, UV rays and moisture.

Applications

The K-CL photoresists were developed by Kloé to be used in applications demanding reliable photosensitivity, mechanical resistance and high form factor compatibility. These applications include but are not limited to:

- Lithography resins
- Microstructure layers
- Micro optical elements
- Pixelized optics

www.kloe.fr

KLOE SA • 1068 rue de la vieille poste 34000 MONTPELLIER • FRANCE (33) (0)467 821 910 (33) (0)467 731 485 kloe@kloe.fr