

Heraeus

CLEVIOS™ PEDOT

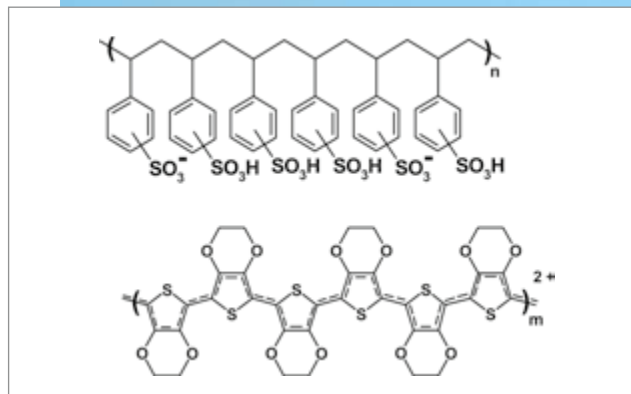
A hand is shown touching a glowing blue globe. The globe is surrounded by a network of blue lines and dots, representing a molecular structure. In the foreground, there is a glass flask containing a blue liquid. The background is a gradient of blue and green.

Innovate with Clevios™
PEDOT Conductive Polymers

Innovate with Clevios™ PEDOT Conductive Polymers

The use of intrinsically conductive polymers is rapidly developing. Marketed under the name of Clevios™ this groundbreaking 3,4-polyethylene-dioxythiophene base product range is set to continue its success story.

Clevios™ PEDOT/PSS is a class leader in the field of conductive chemistry. New kinds of flexible displays, high performance electrolytic capacitors, antistatic and conductive protective and shielding layers, OLED, OPV and printed electronics are just a few of the many possible applications for Clevios™.



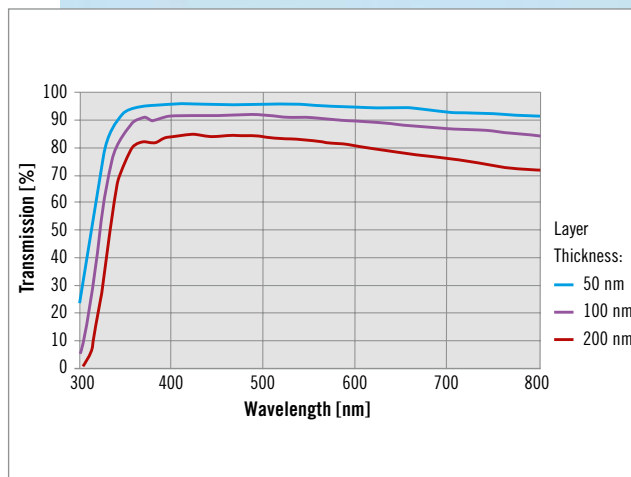
Key Characteristics

Film

- Conductivity tunable over wide range
- Transparent and clear
- Excellent mechanical flexibility
- High thermal and chemical stability

Dispersion

- Aqueous dispersions
- Safe handling
- Easy to use by coating and printing
- Tailored product range
- Manufactured on industrial scale



Clevios™ Conductivity / Resistivity Range

10^{-5}	10^{-4}	10^{-3}	10^{-2}	10^{-1}	1	10	10^2	10^3	10^4	S/cm
1E10	1E9	1E8	1E7	1E6	1E5	1E4	1000	100	10	Ω/\square

Application Methods

- Screen Printing
- Inkjet Printing
- Gravure Printing
- Slot-Die Coating
- Spray Coating
- Dip Coating
- Spin Coating

Areas of Application



Antistatic coatings of plastic and glass

Clevios™ provides transparent, antistatic, and dissipative properties on PET and other substrates to avoid static charges that can cause dust attraction, and damage by electro-static discharge (ESD). Uses include packaging trays, protective / release films, instrument housings etc.



Capacitive Touch Panels

Transparent touch sensors in touch displays can be made with Clevios™ coated plastic films. Patterning of the sensors is done by the Clevios™ Etch technology. The unique flexible properties of Clevios™ enable the next-generation flexible and foldable touch displays.



Printed Capacitive Touch Keys, Sliders and Switches

Transparent sensor electrodes are screen-printed using Clevios™. The unique flexible properties enable 3D-shaped touch sensitive surfaces by thermoforming. Uses include toys, whiteware, automotive etc.



Smartwindows

Coatings of highly conductive Clevios™ on PET film or glass act as the transparent electrodes in smartwindows to switch the PDLC (polymer dispersed liquid crystal) layer by applying an electric field.



Electroluminescence (EL)

Clevios™ is used for screen printing of transparent electrodes in thick-film electroluminescence. Its flexible properties enable new uses on paper or fabric substrates for smart packagings and wearables.



OLED Lighting / OLED Displays

Clevios™ is used in organic light emitting diodes as hole-injection layer (HIL) in OLED displays, and as transparent electrode layer with excellent planarization properties on metal-mesh and -nanowires in OLED lighting.



Organic Solar Cells / 3rd Gen PV

Clevios™ Solar grades are used as hole transport layer (HTL) and transparent top electrode. Solvent-based types are under development for perovskite solar cells.



Capacitors

Clevios™, used as cathode material, has revolutionized the performance of electrolytic capacitors.



LCD Shielding

Clevios™ coatings on display glass can be used in IPS LCD for ESD and EMI shielding.

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The data given here is correct as of October 2018. We reserve the right to make technical alterations as necessary.

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