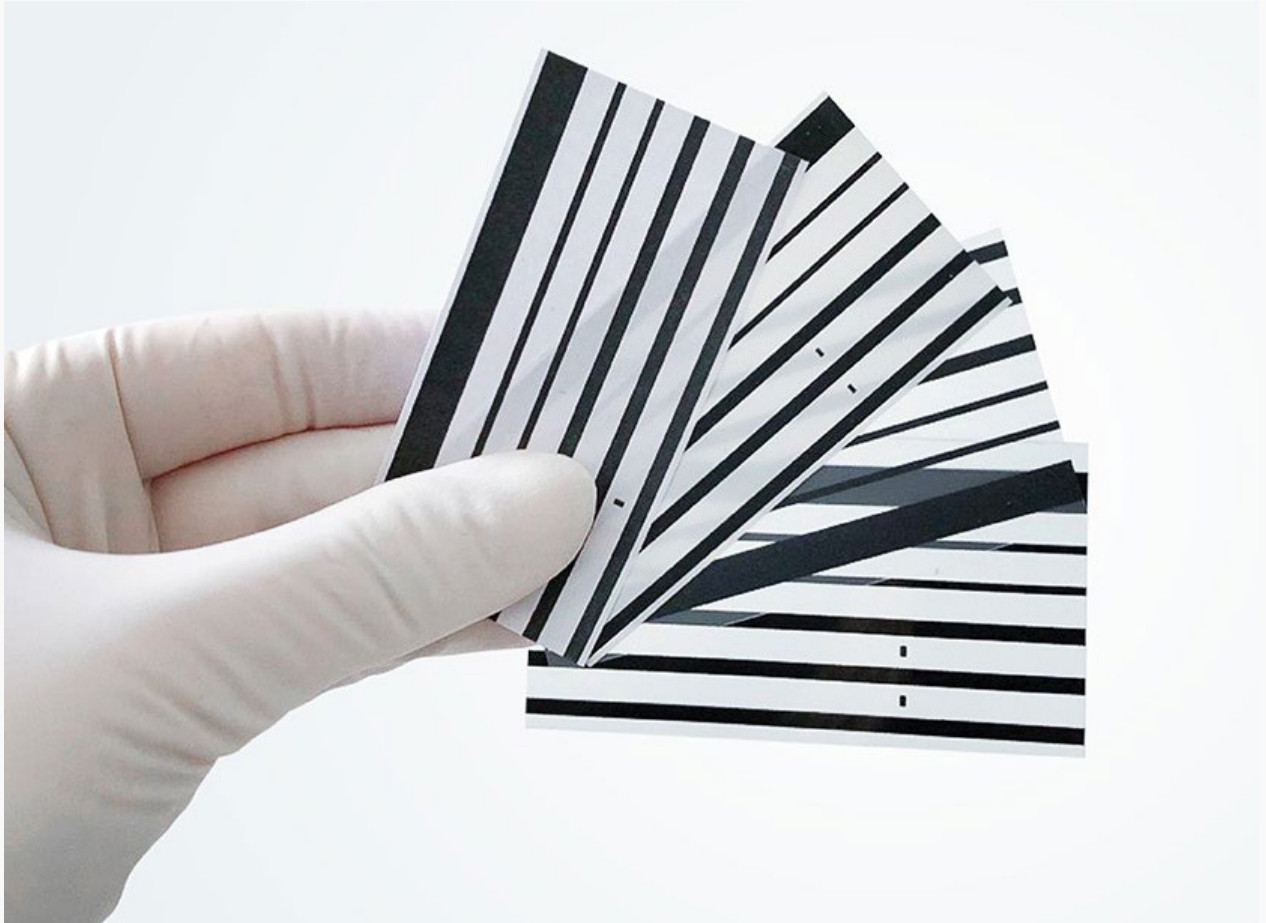




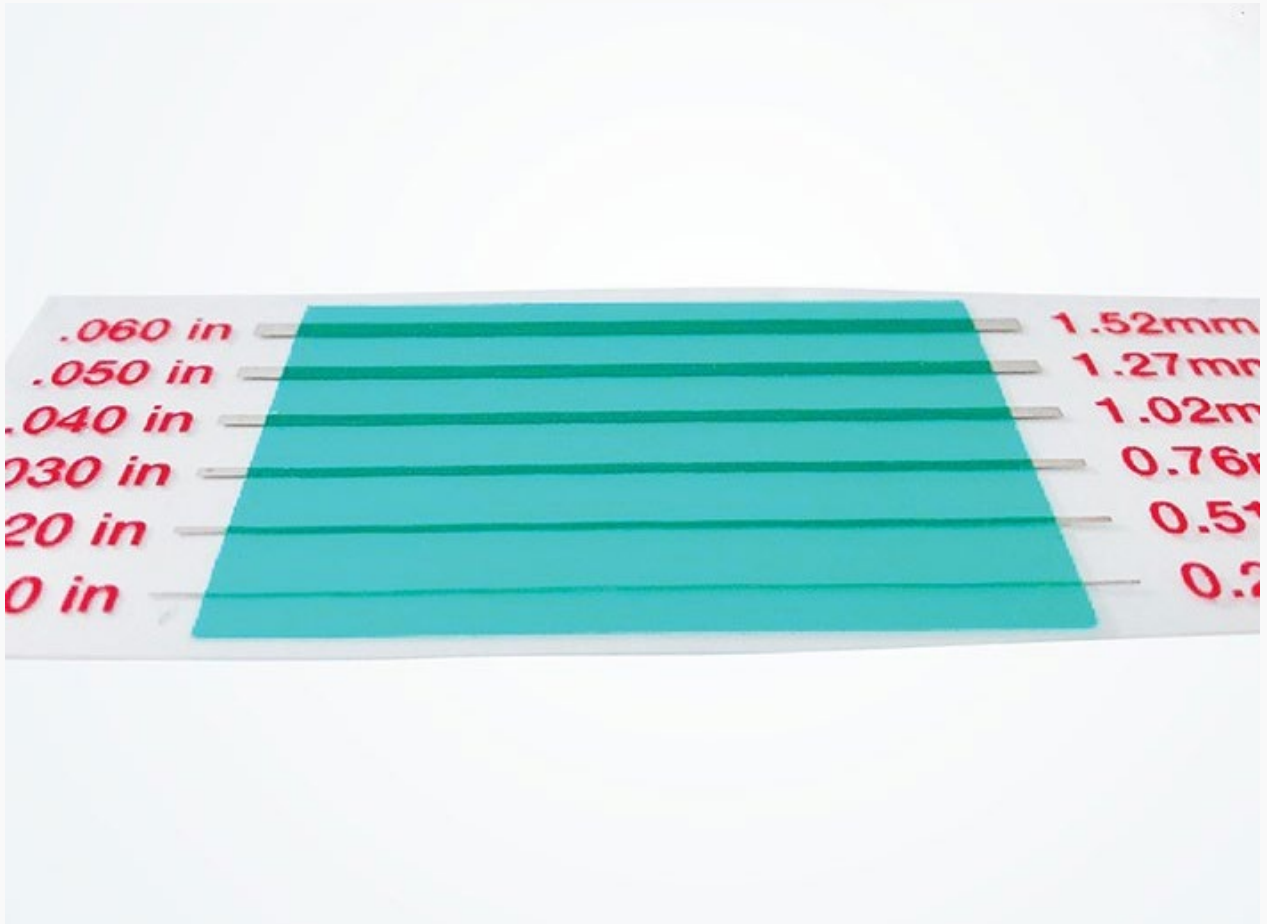
## Silver Ink

Conductive silver inks are especially suitable for highly conductive printed electronic applications. Our silver inks provide different conductivity levels and offer additional features such as flexibility, stretchability, and chemical resistance. Selected silver inks are also halogen-free and formable. Our formable silver inks are also suitable for the creation of 3D-shaped, in-molded electronics. Additionally, our conductive silver inks vary in mechanical strength, adhesion, viscosity as well as their substrate suitability. Depending on the volume and speed necessary for production, we offer flexo, gravure and screen-printing silver inks as well as silver inks for spraying, dipping, or brushing coating applications.



## Carbon Ink

Electrically conductive carbon-based inks can be used alone or in combination with silver inks. They are widely used to manufacture electronic applications, e.g., resistors, sensors, and heating elements. The carbon-based inks offer good abrasion resistance, adhesion, and a variance in resistance. In fact, our carbon inks can be blended to achieve specific resistance levels. Therefore, carbon-based inks are especially suitable for creating response sensitivity and heating profiles and are often applied to create membrane switches and printed (rigid) circuit boards (pcb). Overall, our carbon-based inks are applicable to a variety of plastic films and paper substrates by using printing techniques such as screen, flexo and gravure printing.



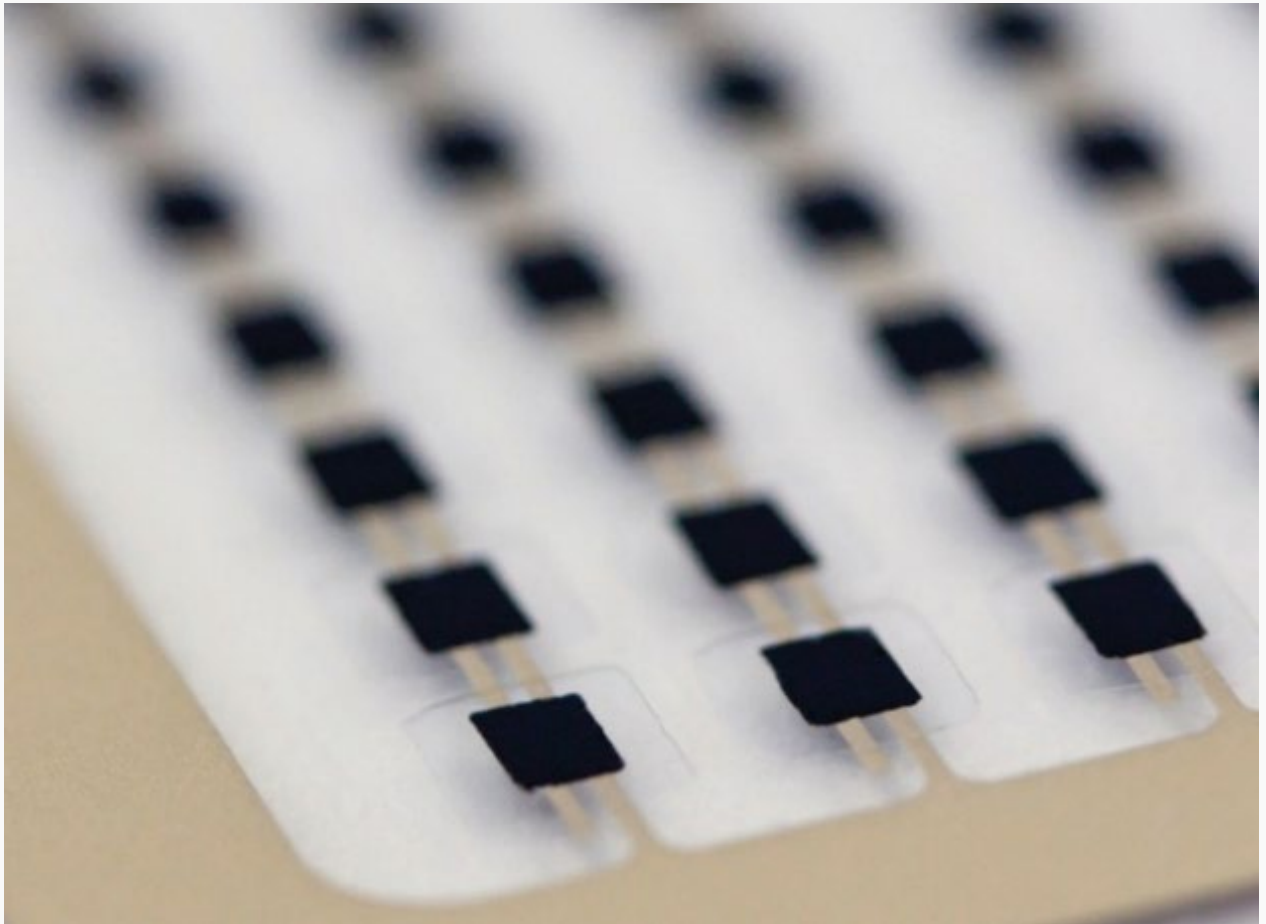
## Dielectric Ink

Non-conductive, dielectric ink is typically used to create insulating layers for multilayer circuitry. By creating conformal coatings based on dielectric inks, additional protection to the printed circuit is offered, which improves the strength and performance for multiple applications including keyboards, copper-etched circuitry, and hybrid circuits. In addition, dielectric inks offer excellent flexibility, humidity resistance as well as good adhesion. Our dielectric inks are suitable for screen printing and are applicable to polyester foil.



## **Silver/Silver Chloride Ink**

Silver/ silver chloride inks allow for the interaction with organic interface gels to measure electronic signals on the human body; this type of ink is frequently used to create medical electrodes for biosensing applications. The silver/ silver chloride inks offered in our portfolio provide excellent conductivity, good adhesion, and flexibility. Depending on the amount of silver chloride within the silver/ silver chloride ink, different sensitivity levels can be achieved, making them suitable for different medical electronic devices, e.g., ECG Electrodes. Our silver/ silver chloride inks are suitable for different substrates such as plastic foils or paper and can be applied via screen printing.



## PTC Ink

Positive temperature coefficient inks, “PTC inks”, offer the innovative possibility to design flexible, self-regulating heating elements that are safe in usage. PTC inks are especially relevant for the creation of heating elements in the field of automotive, furniture and building design. PTC inks can heat up to a certain temperature threshold, also called “switch-off temperature”. The switch off temperature of the PTC inks offered in our portfolio varies between  $\pm 60^{\circ}\text{C}$  and  $\pm 105^{\circ}\text{C}$ . We also offer PTC inks that are suitable for low as well as high voltage circuitry applications and can be applied to different substrates such as different plastic foils. Our PTC inks can be applied via screen printing.