

Gwent Electronic Materials Ltd. is currently able to offer a range of new products that have been especially designed to be applied by Industrial Ink Jet equipment.

One of our many products for this range is a solution of an Organic Silver Compound in Aromatic Hydrocarbon solvent.

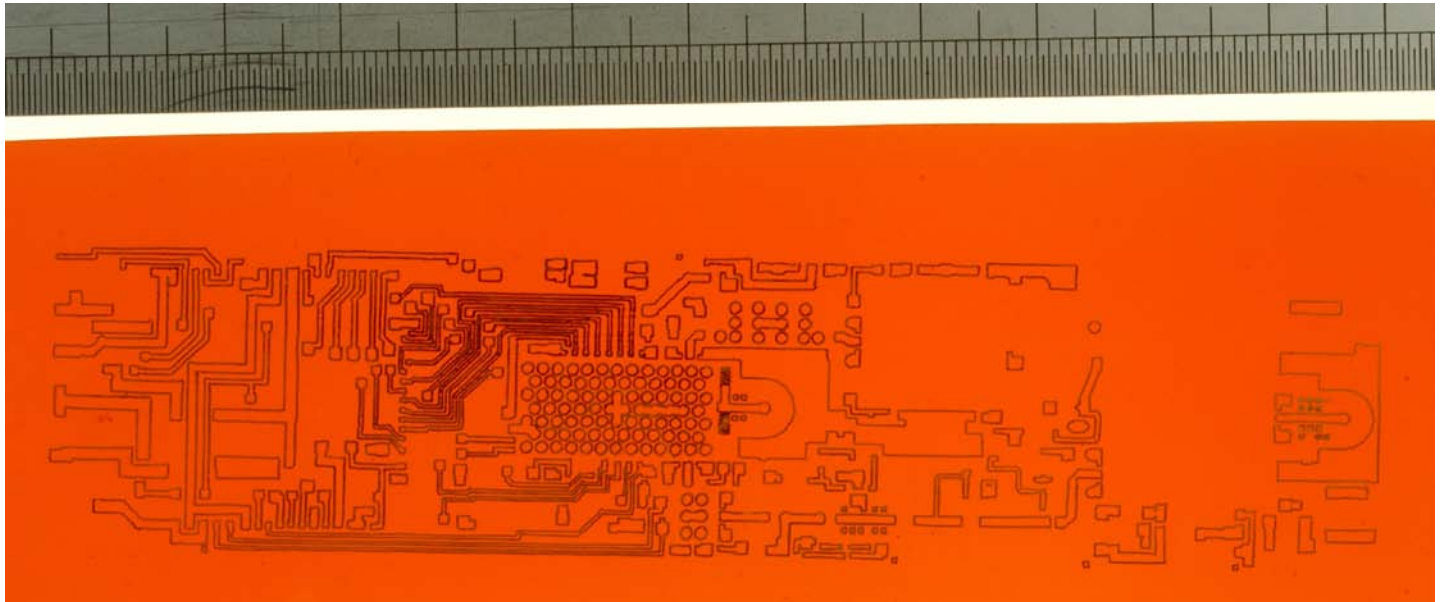
It is designed specifically for ink jet printing using a the Dot-on-Demand print head system.

The advantage of this material over the particulate inks is that as these are true solutions there is no problem with the head blocking which occurs with the more normal particulate based systems that are available from other ink manufactures.

After printing the Organic component is broken down and vaporised to leave a pure Silver conductor. During the process the Silver metal is deposited as small nano-particles that gradually merge to form a coherent conductor track. This 'activation stage' is carried out at a temperature of only 150°C for 60 minutes. These low activation temperatures mean that these products can be applied to a wide range of polymer substrates

The Silver conductor produced in this way will adhere to a variety of substrates including Alumina, glass, Polyimide and Polyester. The wide substrate tolerance together with the low temperatures involved in the process allow relatively inexpensive substrates to be used, thus making this material suitable for use in disposable units.

The illustration below shows a complex conductor track written on Polyimide film using a commercially available Dot on Demand print head.



The other members of the range and the alternative of particulate inks can also be produced

