

# STRETCHABLE CARBON CONDUCTIVE INK I10

SETCIT70010

## PRODUCT DESCRIPTION

Water-based Carbon conductive ink for printing stretchable circuits. It needs to be printed in combination with one of the dedicated "encapsulant" inks (EPTATECH SEPRPE10010, SEPRPE10020, SEPRTR17010).

## APPLICATION FIELDS

- The ink is printed in combination with encapsulating inks on sacrificial supports from which the final set of inks can be removed. Depending on the selected encapsulant, the final application can be:
  - on textile surfaces by using "transfer printing" technique, common in the Textile Industry (a thermoplastic adhesive, like EPTAINKS TEXIFLOCK E-FF, is needed). Suggested transfer conditions:  
180°C, 4 bar, 15 seconds or  
130°C, 4 bar, 30 seconds  
Peel – off cold
  - on a non-textile surface, as a "decal"
  - "self-standing" circuits, resembling those printed on elastic membranes, that can be peeled off from the printing support

## GENERAL FEATURES

- Sheet resistivity: < 40 Ohm/sq@25µm at 0% elongation
- High flexibility and elasticity
- High printability
- Can be over-printed by other EPTATECH conductive inks
- Formaldehyde, phtalates and hevly metal free

## APPLICATION PROCESS

<b>Support</b>	Polyester release film with encapsulant layer as primer
<b>Th/cm</b>	From 43 Th/cm (110 Th/inch) to 55 Th/cm (140 Th/inch)
<b>Suggested Emulsions</b>	Eptatech ZERO-IN UNIVERSAL PLUS, ZERO-IN KS 200
<b>Squeegee</b>	Square edge Hardness 60-65 Shore
<b>Drying</b>	120°C, 2 minutes 110°C, 3minutes
<b>Suggested curing</b>	150°C, 5 minutes
<b>Cleaning</b>	Water or Screen clean ST
<b>Storage</b>	Away from solar light Temperature 15°-35°C
<b>Package</b>	1 Kg
<b>Safety Data Sheet</b>	Available upon request

## PREPARATION

- Ready-to-use ink. Does not require dilution
- Stir the ink gently before printing

## APPLICATION

- For the best definition, during printing, it is recommended to adjust the off contact and the pressure of the squeegee at their best, in order to obtain an ink film that can remain onto the surface of the substrate.
- Keep the screen wet, by nebulizing water

## CURING

- It is suggested a curing step at 150°C to maximize electrical performances

## SPECIAL INSTRUCTIONS

- Always test the printing characteristics, before starting production.
- Always check curing conditions.
- This ink does not resist dry cleaning and bleaching
- Squeegees, screens and cases, that are used with other ink series, must be cleaned well, in order to avoid any possible contamination.
- In order to avoid a quick drying, due to environmental conditions:
  - Print and lay an adequate ink quantity
  - In case of long breaks, do not cover the drawing in the screen, and spray small quantities of water, before starting again.
  - Nebulize small quantities of water, in order to compensate the loss in humidity

## WARNING

This technical data sheet does not replace either the Safety Data Sheet or the specific Conformity Declaration. These documents may be required to our SHEQ (Product safety office), at the following e-mail address: [safety@eptainks.com](mailto:safety@eptainks.com) The technical data sheet does not relieve the printer, who remains the only responsible of the respect of the regulations, the specifications and the related required certifications of the finished items.

## EQUIPMENT

Indicated for using onto automatic and semiautomatic machines.

## IMPORTANT NOTE

The information given in this technical sheet is not intended to be exhaustive and any person, using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us to the suitability of the product for the intended purpose, does so at his own risk. While we endeavour to ensure that all advice we give about the product is correct, we have no control over either the quality or condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.