

# INKTRONIC CLEAR DE 40689 UV

Provisionary Technical Data Sheet

## Dielectric UV Varnish

### DESCRIPTION

INKTRONIC CLEAR DE 40689 UV is an extremely flexible, bluish dielectric UV varnish. It can be used as a protective and insulating layer, on or between layers of conductive inks (crossover bridges for example), in the manufacture of membrane switches and flexible circuits. Hot stretchable, this dielectric varnish is thermoformable and resists to overmolding temperatures. It finds applications in IME.

### ADVANTAGES

- Excellent flexibility and thermoformability
- Resistance to solvents and humidity
- High breakdown voltage
- Can be used on a wide variety of substrates: polycarbonate, treated and untreated polyester, polyimide, glass and ITO substrates

### UNCURED INK CHARACTERISTICS

Solid content	100%
Color	blue
Density	1,10 Kg/L
Theoretical consumption	40 to 60 m <sup>2</sup> /Kg
Shelf life (original unopened jar)	12 months at 25 °C

### SCREEN PRINTING

#### Recommended screen mesh :

Polyester mesh : 77 to 120 threads/cm  
Stainless steel mesh : 78 to 157 lthreads/cm

#### Emulsion type :

Resistant to solvents

Total film thickness film: 25 to 40 microns

A double print (with UV curing between each layer) is recommended for insulation electrical applications. Each print must have a thickness between 13 and 20 microns

To print spacers, a deposit of 50 to 80 microns is recommended.

### UV CURING

Dose (Peak Irradiance) radiometre EIT:  
500 to 1000 mJ/cm<sup>2</sup>

Generally speaking, the curing speed depends on the type of the UV dryer (reflectors), the number, the power and age of the UV lamps, the thickness of the deposited ink layer, the color of the substrate as well as the speed of the conveyer.

*Encres DUBUIT guarantees the quality of our products. However, we cannot guarantee the final result, because we exercise no control over individual operating procedures. Our responsibility is limited solely to the exchange of ink or varnish. The quality of a substrate to be printed can vary, as well as an overprinted ink; therefore, the above information is given in good faith based on the state of our art and prior experience. This statement also applies to our technical assistance. When using our inks and varnishes on a new substrate or when changing operating procedures, we strongly recommend testing first a full-scale production to ensure compatibility. Please refer to our General Conditions of Sales.*

### CURED INK CHARACTERISTICS

Resistivity @ 25 microns	> 2x10 <sup>9</sup> Ohm/□
Dielectric constant (at 1 KHz)	around 4
Breakdown voltage (V/25 microns)	> 1 kV
Dielectric strength	> 1000 Volts/mil
Insulation resistance	> 1000 meg-ohms

### SECURITY

For all handling and safety information, consult the MSDS.

### DIRECTIONS FOR USE

- Stir INKTRONIC CLEAR DE 40689 UV varnish before each use
- Bring the product to room temperature before using it



### CLEANING

To clean the screen and equipment, use Solvent ECO N or other suitable solvents.



### STORAGE

- Store the product in the unopened container in a dry place.
- Storage information may be indicated on the product labelling.
- Store in a dry place at 5 to 25 °C.
- **DO NOT REFRIGERATE**
- Ink from containers may become contaminated during use, never put ink back in the original pot.

### HEALTH AND SAFETY

The vast majority of printing inks and related products formulated by Encres DUBUIT contain no substances of very high concern. Our products comply with the requirements of Directives 2011/65/EU (RoHS 2), 2015/863/EU (RoHS 3) and 94/62/EC (heavy metal concentration levels present in packaging). For more information about our regulatory compliance, please consult the MSDS.

