

TECHNICAL SPECIFICATIONS

PRODUCT DESCRIPTION

The SILVER ELECTRON STRETCHABLE (SES) is a NON-CMR solvent ink.

APPLICATIONS

Compatible with PET, polycarbonate and polyurethane substrate.

The above-mentioned substrates may differ according to their origin. It is therefore essential to carry out preliminary test.

MAJOR ADVANTAGES

High conductivity, flexible and stretchable ink.
High-temperature resistant after curing.
Thermoformable.
Excellent adhesion and printing resolution.

ELECTRICAL PROPERTIES

Resistivity $\leq 15\text{m}\Omega/\text{sq}/\text{mil}$ ($3,8 \times 10^{-7}\Omega\cdot\text{m}$)

PRINTING

Printers: Screen printing for automatic, semi-automatic and manual machines.

Screen: all types of polyester or stainless-steel fabrics can be used with a mesh from **77 to 90 threads/cm**.

Squeegees: polyurethane **Shore 65**, good sharpness.

Dilution: no dilution must be performed before printing. However, manual shaking is recommended before use.

Cleaning: MP201.

THICKNESS PRINTING

90 threads/cm polyester mesh : 9 microns

DRYING AND CURING

Thermal curing: **130°C (266°F) during 30 min**

150°C (302°F) during 10 min

Thermoforming: Drying at 50 – 90°C + curing during the thermoforming process performed between 200°C and 300°C.

NIR lamps: 2 seconds

PACKAGING

High density polypropylene pots (PEHD). Open pots for sampling must be carefully closed as soon as possible.



Ink properties

TEST	PROPERTIES
Viscosity (Poises), Rotathinner 562 RPM, 25°C	25
Coverage (cm ² /g) : Depending on thickness	290 - 370
Shelf-life on screen (min)	> 60 min

Physical properties of conductors printed

TEST	PROPERTIES
Resistivity (mΩ/sq/mil) ; PET - TCA	< 10
Resistivity (mΩ/sq/mil) after 20% elongation TPU	< 50
Resistivity (mΩ/sq/mil)* after thermoforming Polycarbonate	< 300
Adhesion (cross-cut test)	ISO Class 0 according to EN ISO 2409 :2020 standard.

* Results can vary some depending upon the degree of elongation after thermoforming.

WASTE MANAGEMENT

Packaging contaminated with hazardous substances.
Do not dispose into the environment.

VFP Ink Technologies encourages all users to develop a responsible environmental policy.

Guarantee reserves: Although the data in this leaflet have been established after careful testing, it is provided as a guide; no liability can arise from this for VFP, it being understood that we advise you to carry out preliminary tests before any commercial draw. No seller, representative or agent has the right to give any guarantee or insurance, which would be in contradiction with what is said above. In any case, refer directly to our general conditions of sale.

HEALTH AND SECURITY

Refer to the MSDS.
We recommend that you wear Personal Protective Equipment recommended by the MSDS and follow its handling precautions.

STORAGE

6 months in its original packaging stored between +5°C and +35°C.