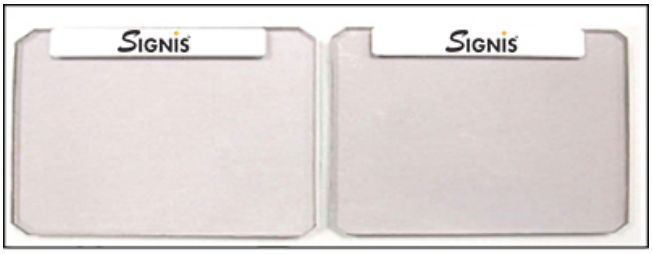
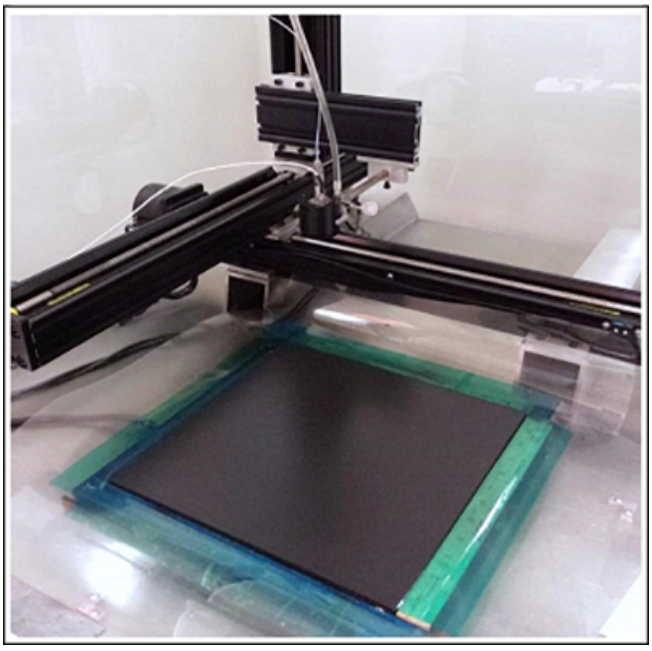
AC100

Aqueous Transparent Conductive Ink for Spray Coating

AC100 is an aqueous carbon nanotube (CNT) ink engineered for spray coating on a wide range of plastic films. For optimum transparent conductor performance, rinsing with deionized water to remove surfactant and top-coating with a polymer such as Nafion® is recommended following AC100 deposition.

Property	AC100
Ink Appearance	Black Liquid
Ink Form	Aqueous Dispersion
CNT Type	CoMoCat SW-CNT
Surfactant	Sodium Dodecyl Sulfate (SDS)
CNT Concentration	0.2 g/l
Surfactant Loading	1 wt%
Density	1.0 g/l
Viscosity (mPa s) @ sheer rate 10 s^{-1}	1.0
pH	8.2





Film Attributes:

- Neutral Color
- Low Haze
- Flexible
- Durable
- Stretchable

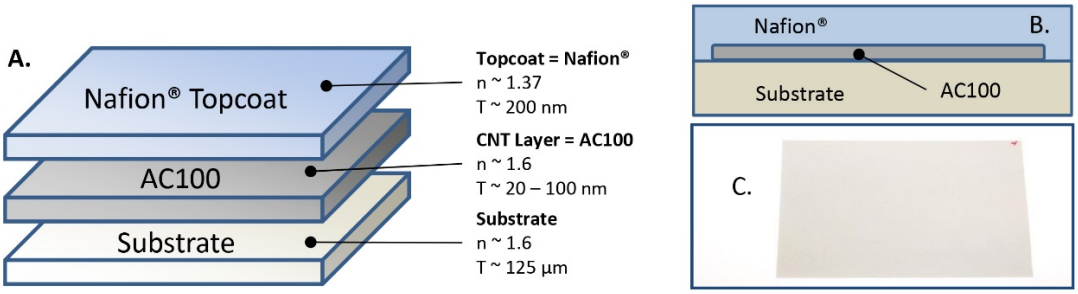
Let us help you!

The material scientists and engineers in CHASM's Application Development Center are available to help you integrate AC100 into your application.

AC100

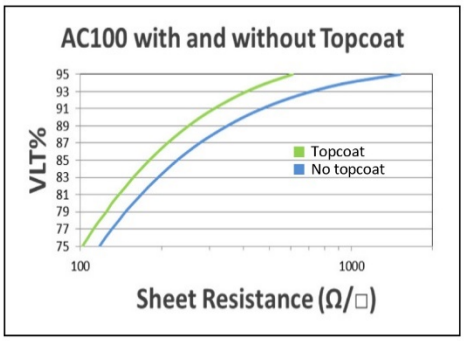
TCF Performance

Following deposition of AC100, rinsing with deionized water to remove surfactant and application of anti-reflective Nafion® topcoat are recommended.



Nafion topcoat improves sheet resistance and enhances visual light transmittance (VLT%). (See corresponding AC100 Application Note for more information on topcoat deposition.)

	Before Topcoat			After Topcoat		
AC100 Number of Spray Passes	VLT%	Sheet Resistance (Ω/□)	Topcoat Wet Film Thickness (µm)	VLT%	TT% (ST505 PET)	Sheet Resistance (Ω/□)
20	91	330	12	93	87	340
28	87	226	12	90	84	215
30	86	185	12	88	82	190
37	83	139	12	85	80	145
40	81	128	12	81	76	93



Topcoated films exhibit neutral color and low haze at VLT levels between 70-95%, and beyond.

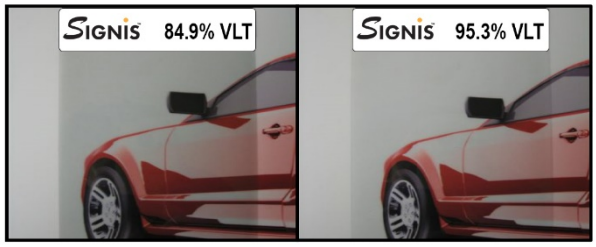


Figure 2. AC200 coated on PET substrate at 85% VLT (left) and 95% VLT (right).

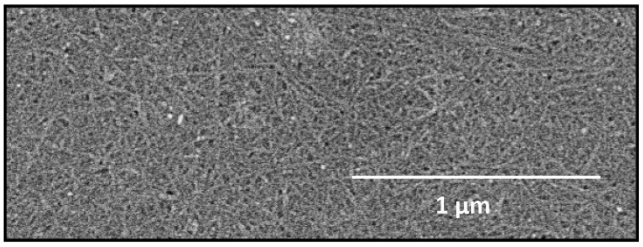


Figure 3. SEM scan of AC200 CNT network on PET substrate at areal density of ~10mg/m^2.

Applications Engineers are available to provide additional data and technical support to help you integrate Signis CNTs into your application. Email sales@chasmtek to request additional information.