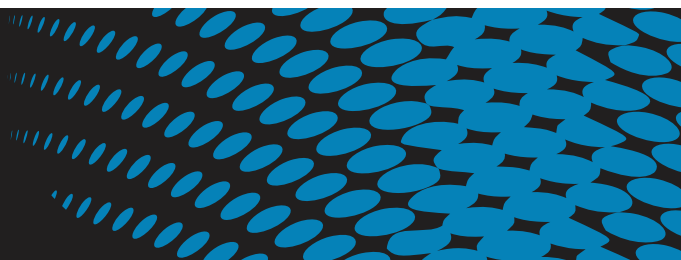


# FE3203

Flexible Carbon Conductor



## Product Description

ACI FE3203 is a carbon filled flexible conductive trace ink for use on PET, polyimides, and other bendable substrates. This development material offers high conductivity for a 100% carbon conductor with rheology tailored toward low slump and fine feature resolution via screen printing. After cure FE3203 has excellent adhesion and flex ductility to accommodate various packaging form-factors and use cases. The ink is fully compatible with other products in ACI's flexible electronics platform.

## Product Benefits

- High conductivity carbon conductor.
- Limited resistivity change associated with bending and flexing.
- Good feature resolution.
- Excellent adhesion to PET and polyimide.
- Screen printable for volume applications.
- Fully compatible with ACI's flexible adhesives and dielectrics.

## Typical Performance

Volume Resistivity 120 °C for 15 min in box oven	< 10 Ω/square/mil < 2.5 x 10 <sup>-2</sup> Ω*cm
Resistance Change after 10,000 cycles at 1 mm radius <sup>1</sup>	<5%
Adhesion <sup>2</sup>	5B

## Typical Properties

Physical State	Paste
Color	Black
Viscosity <sup>3</sup>	125 Pa·s
Density	1.17 g/mL
Percent Solids <sup>4</sup>	36.7%
Shelf Life at 20°C	12 Months

## Typical Processing Parameters

Deposition methods <sup>5</sup>	Screen, Dispense Direct Write, contact for others
Curing Time and Temperatures	15 min box oven ≥ 120°C <5 min in industrial conveyor oven at ≥120°C
Recommended Screen Mesh	145.0022" / 230.0011"
Recommended Cured Thickness	15µm / 10 µm
Coverage	15 m <sup>2</sup> /kg / 25 m <sup>2</sup> /kg
Recommended Thinner/Diluent	ACI FE8106
Clean up	Acetone / MEK / Similar Solvents

<sup>1</sup> 180° U-Flex at 1 mm radius on Yuasa DMLHP-FS

<sup>2</sup> ASTM D3359 Method B

<sup>3</sup> Anton Parr MCR302 10 s-1 at 25°C

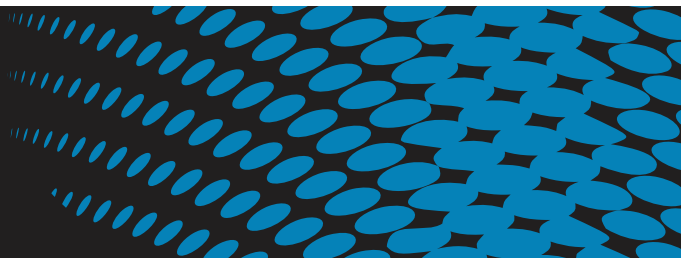
<sup>4</sup> 150 °C for 120 minutes in box oven

<sup>5</sup> Recommend DAC mixing prior to screen printing



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## Contact ACI

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## Caution

Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate SDS information.

## Disclaimer

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