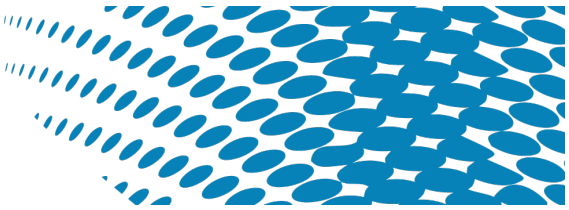
SH5025

Printed Fixed Resistance Heater Ink



Product Description

ACI SH5025 is a stretchable resistive trace designed for heating applications integrated onto elastomeric substrates. When cured, the ink has a prescribed resistance value and offers excellent flexibility and stretchability. SH5025 has superior adhesion to TPU and other elastomeric substrates, and is fully compatible with ACI's other stretchable electronics products. Contact ACI's engineering team for any design questions you have in using this ink in your heated project.

Product Benefits

- Superior stretch performance with elastomeric substrates
- Excellent adhesion to TPU and other elastomeric substrates
- Washable with ACI stretchable insulator
- Screen printable for volume applications
- Fully compatible ACI's stretchable electronics platform

Typical Performance	
Volume resistivity 135°C for 15 min in box oven	< 0.031 Ω/square/mil < 8.0 x 10^{-5} Ω·cm
Maximum Elongation[1]	>50%
Adhesion[2]	5B
[1] 2 mm wide trace cured on TPU substrate [2] Method based on ASTM D3359 Method B	

Typical Properties as Supplied	
Physical State	Viscous gray paste
Viscosity[3]	32 Pa·s
Density	2.1 g/cm^3
Percent Solids[4]	64%
Shelf Life at 20°C	6 Months

Processing	
Deposition methods	Screen printing; micro dispense
Curing Time and Temperatures	5 min in box oven ≥ 135°C 5 min in industrial conveyor oven at ≥125°C
Recommended Screen Meshes	200/230 Stainless Steel
Recommended Squeegee	RKS Carbon BW or S HQ
Coverage for Recommended meshes	10/12 m^2/kg
Recommended Cured Thickness[5]	8-12 µm
Mixing	Slow thorough mix, avoid inducing bubbles, fixed spatula in rotating jar ideal[6]
Recommended Thinner/Diluent	TD8106
Clean Up Solvents	Acetone/MEK/Similar Solvents
[3] Measured on Anton Paar MCR302 Rheometer at 10^{-1} sec shear rate at 25°C [4] 150°C for 120 min in box oven [5] Double print wet on wet or dry can be used to increase deposition thickness [6] AT-LM4 Stirring Type Mixer (E211) recommended	

ACI MATERIALS

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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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