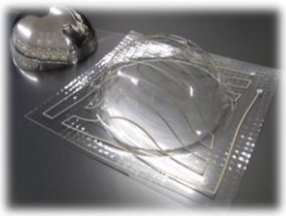
ELECTROCONDUCTIVES

DOTITE XA-3737

for Molding & Forming

1. Product Introduction

DOTITE XA-3737 is a screen printed conductive paste for molding and forming applications. It is suitable for substrates that are weak to solvent, such as polycarbonate. DOTITE XA-3737 can stretch up to 60% without breaking, allowing it to be used in in-mold, insert, and other molding processes.



2. Specifications

	XA-3737	Remarks
Application	Screen printing	Mesh: 200 ~ 300 Emulsion: 5 ~ 20μm
Substrate	PC, PET, etc.	
Curing Condition	125℃ 30 min.	Forced convection oven
Storage	Refrigerated (10℃ or below)	
Expiration	TBD	
Appearance	Yellow-silver paste	DSTM-351
Viscosity	150 dPa･s	DSTM-203
Resistivity	6.0×10^{-5} Ω･cm	DSTM-101 – 125℃ 30 min.
Adhesion (PC film) Adhesion (PET film)	100/100 100/100	DSTM-401 – 125℃ 30 min.
Pencil Hardness	B	DSTM-402 – PET film 125℃ 30 min.

※ This DOTITE product is under development. The above values may be subject to change

3. Instructions and Warnings

- Use proper safety equipment such as masks, eye protection, and gloves when working with this DOTITE product.
- If condensation forms on the container the product may become contaminated when opened. Allow it to reach room temperature (23℃) before opening the container.
- Before use, thoroughly mix the product to ensure even dispersion. Performance may be affected if product is not mixed thoroughly.
- Apply this DOTITE product to a clean substrate. If the substrate is contaminated with oil, dust, or other foreign objects, performance may be affected.
- Recommended curing conditions for this product are as follows: 125℃ 30 minutes. However, adjustments may be necessary to ensure peak performance when cured.
- DOTITE SC-4 Thinner, SC-5 Thinner, a glycol ester- or ketone-based solvent are recommended for cleaning this DOTITE product off of tools and equipment.
- After use, close securely and refrigerate (10℃ or below).
- For other handling and safety information, please refer to the SDS documentation for this product.

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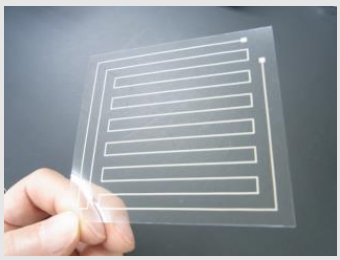
4. Example Images (Insert Molding)

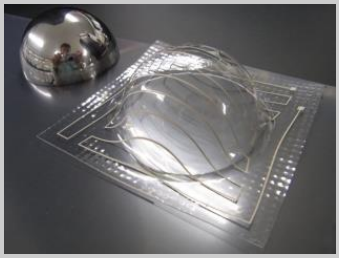
※The below images are for reference only and do not represent finished products.

Screen Printing

Curing



Vacuum Forming



Insert Molding

Print Settings

・Screen	Tetoron 300 mesh
・Emulsion	10μm
・Squeegee	Urethane (80)
・Speed	100 mm/s
・Pressure	0.4 MPa
・Clearance	3 mm

Curing Conditions

・125℃ 30 min. (mechanical convection oven)

Molding

・Shape	φ50 mm half sphere (stainless steel)
・Heat (Temp.)	190℃(work surface maximum)
・Heat (Time)	15s

・These data are derived from tests conducted by Fujikura Kasei under lab conditions and do not represent this product's properties in all environments. We recommend that the curing conditions, cured film properties, safety precautions, overall applicability for the user's intended purpose, and other factors be confirmed on-site before use.

5. Reference Data

・Stretch Test Data (Expected Expansion During Molding)

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Electronics Materials Division

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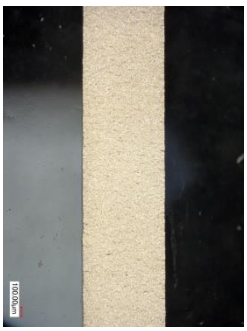
Stretch Test Data (Expected Expansion During Molding)

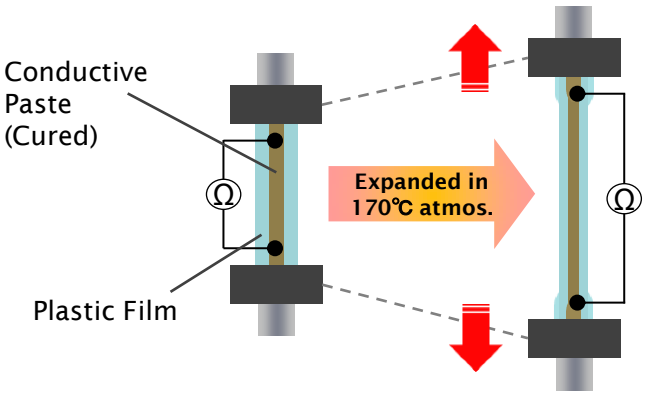
Test Data

When typical conductive paste is applied to PC (polycarbonate) substrate and stretched to 60% of its initial length, cracks appear and conductivity is lost completely.

XA-3737 can be stretched without cracks appearing, and conductivity is minimally affected.

	XA-3737	Other Paste
Appearance after Stretching		
Change in Conductivity	+ 30%	No Conductivity!

Test Method



1. Conductive paste was applied with a width of 0.4mm to a substrate of PC film.
   Application: Screen printing
   Curing: 125℃ 30 min. (Forced convection oven)
2. The sample was stretched at a rate of 20 mm/min to 60% of its initial length in an environment of 170℃
3. Resistivity of the sample was measured before and after stretching; these values were compared and the change in resistivity calculated.

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