DOTITE

Stretchable Pastes

Challenges and Evolution

FUJIKURA KASEI CO.,LTD.

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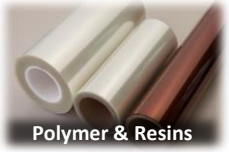
- Established: Sep. 22 1938
- Head Office: Minato-ku, Tokyo
- Employees: 428
- Capital: 5.3 bil. JPY

Business Fields/Core Technology/Strengths
Fujikura Kasei produces polymer materials for a variety of applications, developing unique, value-added products based on our decades of accumulated expertise.



DOTITE Electrically Conductive Pastes

In 1957, we were the first manufacturer in Japan to develop and sell electrically conductive pastes.

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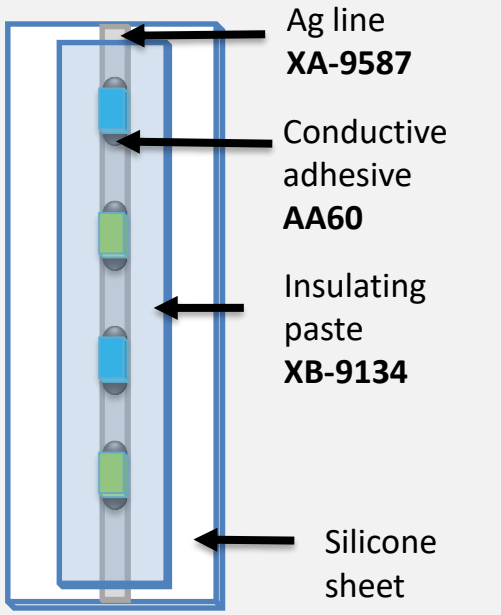
From Stretchable Silicones

Silicone-based Full Stack for Printed Electronics:
Conductive Ink, Adhesive, and Overcoat



	DOTITE XA-9587	DOTITE XB-9134	DOTITE XC-3170LV	DOTITE AA60
Type	Ink for circuitry	Insulating ink	Carbon variation	Adhesive
Resistivity	2×10^{-4} Ω・cm	-	1.8 Ω・cm	5×10^{-4} Ω・cm
Substrate	Silicone sheet	Silicone sheet	Silicone sheet	Silicone sheet
Stretch	100%	100%	100%	-
Curing Conditions	160℃, 60 mins	150℃ 30 mins.	150℃, 30 mins.	160℃, 60 mins.
Application	Screen printing	Screen printing	Screen printing	Metal mask printing

※Urethane-based variations also available.

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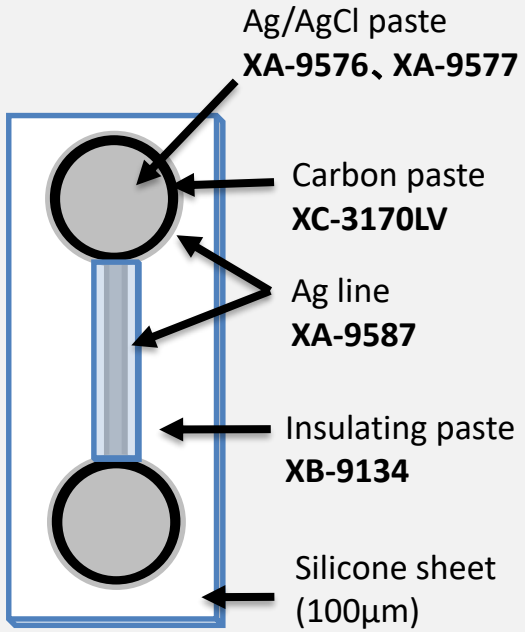
To Stretchable Ink for Medical Devices

Silicone-based Ag/AgCl stretchable ink variations

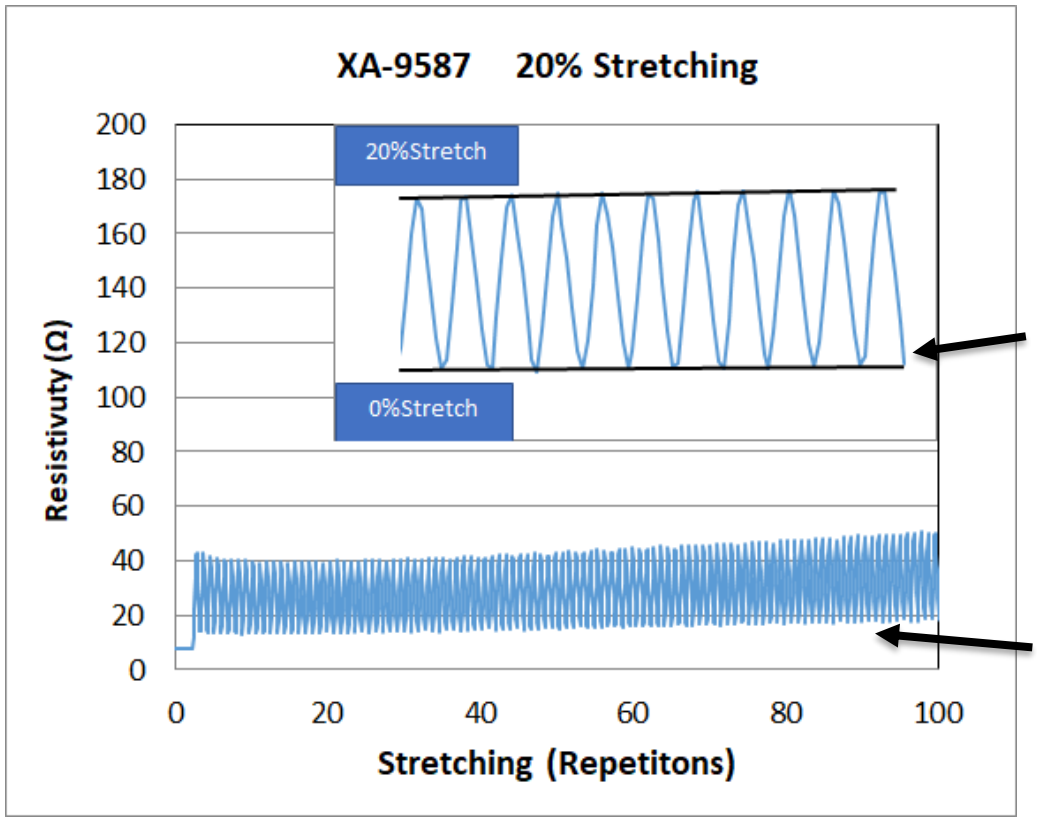
	DOTITE XA-9576	DOTITE XA-9577
Ag/AgCl Ratio	90/10	70/30
Resistivity	4.3×10^{-4} Ω・cm	1.2×10^{-3} Ω・cm
Substrate	Silicone sheet	Silicone sheet
Stretch	100%	100%
Curing Conditions	150℃, 30 mins.	150℃, 30 mins.
Application	Screen printing	Screen printing



Example of multilayer structure for iontophoresis

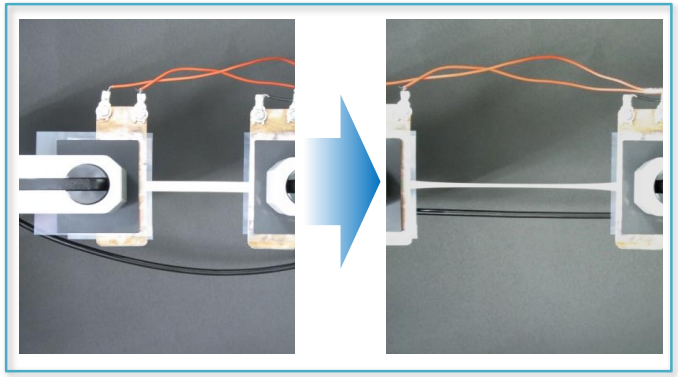
- Based on combined know-how of stretchable inks and conventional Ag/AgCl conductive ink for flexible printed electronics
- For medical electrodes or iontophoresis medicine delivery systems.

Continuous Improvements



After 20% stretch resistivity returns to initial value

Resistivity remains stable through 100 repetitions



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Thank you for listening!