

DOTITE

Electrically Conductive Adhesives



Electronics Materials Division



FUJIKURA KASEI CO.,LTD.

Taking on Challenges and Working Together

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Introduction and Business Divisions

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



Coatings for
Plastics



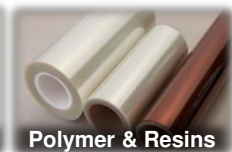
Architectural
Coatings



Electronics
Materials



Medical Materials



Polymer & Resins

DOTITE Electrically Conductive Pastes

In 1957, we were the first manufacturer in Japan to develop and sell electrically conductive pastes and insulators for electronics under the brand name DOTITE. We have a wide range of inks, adhesives, and EMI shield paints.

This catalogue will introduce our electrically conductive adhesive lineup, including some of our newest developments.



DOTITE Conductive Adhesive Lineup

Standard Type

Feature	Model	Resin, Filler	Method *1	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) *2	Tg ($^{\circ}\text{C}$)
320°C Pyrolysis Used in automotive applications	XA-874	Solventless, 1-Component Epoxy, Ag	DS/SP	150°C, 30 mins., on Au/Ag/Cu	Frozen, 3 mos.	8×10^{-5}	20	78

Low Temperature Curing Type

Feature	Model	Resin, Filler	Method *1	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) *2	Tg ($^{\circ}\text{C}$)
100°C Curing For mounting components on FPC	XA-910	Solventless, 1-Component Epoxy, Ag	DS/SP	100°C, 60 mins., on Au/Ag/Cu	Frozen, 2 mos.	2×10^{-4}	16	60
80°C Curing Low thermal stress	AA2121-AN6	Solventless, 1-Component Epoxy, Ag	DS/SP/MP	80°C, 60 mins., on Au/Ag/Cu	Frozen, 1 yr.	5×10^{-4}	12	90
70°C Curing 60°C curing also possible	AA2119-G4	Solventless, 1-Component Epoxy, Ag	DS	70°C, 60 mins., on Au/Ag/Cu	Frozen, 6 mos.	3×10^{-4}	17	60
23°C Curing On PC, ABS substrates	AA2001-D/ AA200H	Solventless, 2-Component Epoxy, Ag	DS	23°C, 24 hrs., On Au/Ag/Cu/ glass/ceramic/ silicon	Room Temp., 3 mos.	5×10^{-3}	13	31

*1) DS: Dispensing SP: Screen Printing MP: Metal-mask Printing *2) Die-Shear Strength

DOTITE Conductive Adhesive Lineup

High Heat Resistance Type

Feature	Model	Resin, Filler	Method *1	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) *2	Tg ($^{\circ}\text{C}$)
360°C Pyrolysis For die-attach, on ceramic substrate	AA1221-A	Solventless, 1-Component Epoxy, Ag	DS	190°C, 30 mins., on Au/Ag/Cu	Frozen, 3 mos.	4×10^{-4}	25	100
360°C Pyrolysis High Adhesion For die-attach, on ceramic substrate	AA1221-R6	Solventless, 1-Component Epoxy, Ag	DS	150°C, 30 mins., on Au/Ag/Cu	Frozen, 3 mos.	2×10^{-4}	45	115
400°C Pyrolysis (in N₂) High heat resistant polyimide type, on ceramic substrate	AA1301-B1	1-Component Polyimide, Ag	DS	180°C, 10 mins. + 290°C, 20 mins., on Au/Ag	Frozen, 2 mos.	2×10^{-4}	10	290

Galvanic Corrosion Resistant Type

Feature	Model	Resin, Filler	Method *1	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) *2	Tg ($^{\circ}\text{C}$)
Stable Resistivity 85°C/85%RH	XA-5651A	1-Component Epoxy, Ag	DS	200°C, 10 mins., OR 180°C, 60 mins., on Au/Ag/Cu	Frozen, 2 mos.	3×10^{-4}	17	90
Low Resistivity, High Adhesion 150°C curing	AA1221-G2-1	Solventless, 1-Component Epoxy, Ag	DS	150°C, 30 mins., on Au/Ag/Cu	Frozen, 6 mos.	7×10^{-5}	30	110

*1) DS: Dispensing

*2) Die-Shear Strength (AA1301-B1 adhesion is Pull-Up Strength)

DOTITE Conductive Adhesive Lineup

Elastic Type

Feature	Model	Resin, Filler	Method ^{*1}	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) ^{*2}	Tg ($^{\circ}\text{C}$)
Elastic Modulus 130MPa Silicone type, for crystal devices	AA1101-S	1-Component Silicone, Ag	DS	180°C, 60 mins., on Au/Ag	Frozen, 6 mos.	2×10^{-4}	2	-120
Elastic Modulus 600MPa Epoxy/urethane type, for crystal devices	FA-750	1-Component Epoxy/Urethane, Ag/Ni	DS	150°C, 60 mins., on Au/Ag/Cu	Refrigerated, 4 mos.	3×10^{-4}	3	6
Elastic Modulus 900MPa Epoxy type, used in SAW filter for automotive applications	AA07	Solventless, 1-Component Epoxy, Ag/Ni	DS	150°C, 60 mins., on Au/Ag/Cu	Frozen, 2 mos.	2×10^{-4}	12	25

Fast Curing Type

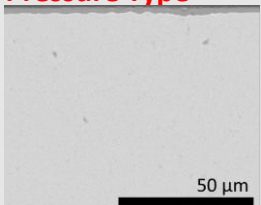
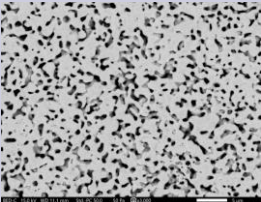
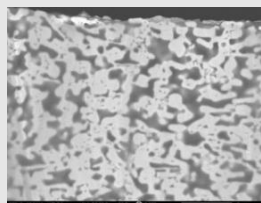
Feature	Model	Resin, Filler	Method ^{*1}	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	Adhesion (N/mm^2) ^{*2}	Tg ($^{\circ}\text{C}$)
210°C, 1 Min. Curing Epoxy type	AA2201-A	Solventless, 1-Component Epoxy, Ag	DS	Hot Plate 210°C, 1 min., on Au/Ag/Cu	Frozen, 6 mos.	2×10^{-4}	8	120

*1) DS: Dispensing

*2) Die-Shear Strength (AA1101-S adhesion is Pull-Up Strength)

DOTITE Conductive Adhesive Lineup

Sintering Type

Feature	Model	Resin, Filler	^{*1} Method	Curing, Substrate	Storage	Resistivity ($\Omega \cdot \text{cm}$)	^{*2} Adhesion (N/mm^2)	Tg ($^{\circ}\text{C}$)
Pressure Type  SEM Cross-Section	AA1901-EP1	Resinless Type, Ag	DS/MP	80°C, 3-5 mins. + 3MPa, 130°C, 10 secs. + 10MPa, 250°C, 5 mins., on Au/Ag	Frozen, 3 mos.	4×10^{-6}	80	-
Non-Pressure Type  SEM Cross-Section	AA1901-EN3	Resinless Type, Ag	DS	200°C, 60 mins., on Au/Ag	Frozen, 3 mos.	4×10^{-6}	60	-
Non-Pressure Type  SEM Cross-Section	AA1901-JE1	Resin type, Ag	DS/MP	200°C, 120 mins., On Au/Ag/Cu/ glass/ceramic/silicon	Frozen, 6 mos.	4×10^{-6}	30	-

*1) DS: Dispensing MP: Metal-mask Printing

*2) Die-Shear Strength

DOTITE Electrically Conductive Adhesive Selection Guide ①

Type	Model	Curing Temperature (°C)															Storage		Method
		23	50	60	70	80	100	120	130	150	180	190	200	210	250	290	Room Temp.	Frozen	
Standard	XA-874									30 Mins.	10 Mins.							3 Mos.	DS SP
Low Temperature Curing	XA-910						60 Mins.	30 Mins.		15 Mins.								2 Mos.	DS SP
	AA2121-AN6					60 Mins.												1 Yr.	DS SP MP
	AA2119-G4			90 Mins.	60 Mins.													6 Mos.	DS
	AA2001D/ AA200H	24 Hrs.	2 Hrs.		30 Mins.												3 Mos.		DS
High Heat Resistance	AA1221-A											30 Mins.						3 Mos.	DS
	AA1221-R6									30 Mins.								3 Mos.	DS
	AA1301-B1										10 Mins.					20 Mins.		2 Mos.	DS
Galvanic Corrosion Resistant	XA-5651A										60 Mins.		10 Mins.					2 Mos.	DS
	AA1221-G2-1									30 Mins.								6 Mos.	DS

DS: Dispensing SP: Screen Printing MP: Metal-mask Printing Green Letter: Pre-Drying Time

DOTITE Electrically Conductive Adhesive Selection Guide ②

Type	Model	Curing Temperature (°C)															Storage		Method
		23	50	60	70	80	100	120	130	150	180	190	200	210	250	290	Room Temp.	Frozen	
Elastic	AA1101-S										60 Mins.							6 Mos.	DS
	FA-750									60 Mins.								4 Mos.	DS
	AA07									60 Mins.								2 Mos.	DS
Fast Curing	AA2201-A													1 Min.				6 Mos.	DS
Pressure Sintering	AA1901-EP1					3-5 Mins.			10 Secs.						5 Mins.			3 Mos.	DS MP
Non-Pressure Sintering	AA1901-EN3												60 Mins.					3 Mos.	DS
	AA1901-JE1												120 Mins.					6 Mos.	DS MP

DS: Dispensing SP: Screen Printing MP: Metal-mask Printing **Green Letter: Pre-Drying Time**

AA1901-EP1 – Pre-Cured: 130°C, 3MPa, 10 secs. – Cured: 250°C, 10MPa, 5 mins.

DOTITE Conductive Adhesive Properties ①

Type	Model	Method	Curing Conditions	Storage	Pot Life (Hrs.)	Resistivity ($\Omega \cdot \text{cm}$)	Viscosity (dPa·s)	Adhesion (N/mm ²)	Thermal Conductivity (W/m·K)	Non-Volatile Content (%)
Standard	XA-874	DS/SP	150°C, 30 mins.	Frozen	48	8×10^{-5}	300	20	3.6	97
Low Temp. Curing	XA-910	DS/SP	100°C, 60 mins.	Frozen	24	2×10^{-4}	400	16	2.1	98
	AA2121-AN6	DS/SP/MP	80°C, 60 mins.	Frozen	240	5×10^{-4}	650	12	-	98
	AA2119-G4	DS	70°C, 60 mins.	Frozen	24	3×10^{-4}	300	17	-	95
	AA2001D/AA200H	DS	23°C, 24 hrs.	Room Temp.	1	5×10^{-3}	700	13	3.0~5.0	100
High Heat Resistance	AA1221-A	DS	190°C, 30 mins.	Frozen	24	4×10^{-4}	90	25	2.5	95
	AA1221-R6	DS	150°C, 30 mins.	Frozen	24	2×10^{-4}	90	20	4.8	97
	AA1301-B1	DS	180°C, 10 mins. + 290°C, 20 mins.	Frozen	24	2×10^{-4}	650	10	—	70
Galvanic Corrosion Resistant	XA-5651A	DS	200°C, 10 mins. 180°C, 60 mins.	Frozen	8	3×10^{-4}	250	17	2.2	94
	AA1221-G2-1	DS	150°C, 30 mins.	Frozen	24	7×10^{-5}	250	30	8.8	95

DS: Dispensing SP: Screen Printing MP: Metal-mask Printing

DOTITE Conductive Adhesive Properties ②

Type	Model	Method	Curing Conditions	Storage	Pot Life (Hrs.)	Resistivity ($\Omega \cdot \text{cm}$)	Viscosity (dPa·s)	Adhesion (N/mm ²)	Thermal Conductivity (W/m·K)	Non-Volatile Content (%)
Elastic	AA1101-S	DS	180°C, 60 mins.	Frozen	120	2×10^{-4}	300	2.0	—	93
	FA-750	DS	150°C, 60 mins.	Frozen	336	3×10^{-4}	55	3.0	—	87
	AA07	DS	150°C, 60 mins.	Frozen	30	2×10^{-4}	265	12	1.7	94
Fast Curing	AA2201-A	DS	Hot Plate 210°C, 1 min.	Frozen	30 (days)	2×10^{-4}	160	8	1.2	97
Sintering (Pressure Type)	AA1901-EP1	DS/MP	80°C, 3-5 mins. +3MPa, 130°C, 10 secs. +10MPa, 250°C, 5 mins.	Frozen	24	4×10^{-6}	520	80	>200	93
Sintering (Non-Pressure Type)	AA1901-EN3	DS	200°C, 60 mins.	Frozen	24	4×10^{-6}	200	60	230	93
	AA1901-JE1	DS/MP	200°C, 120 mins.	Frozen.	24	4×10^{-6}	600	30	170	95

DS: Dispensing SP: Screen Printing MP: Metal-mask Printing

International Chemical Inventories

■ Please inquire for REACH (EU)

Type	Model	TSCA (USA)	IECSC (China)	TCSI (Taiwan)
Standard	XA-874	×	○	○
Low Temp. Curing	XA-910	×	○	○
	AA2121-AN6	○	○	○
	AA2119-G4	×	Under Investigation	○
	AA2001-D/AA200H	Under Investigation	Under Investigation	Under Investigation
	AA1221-A	Under Investigation	○	○
High Heat Resistance	AA1221-R6	○	○	○
	AA1301-B1	○	○ (Not VOC Compliant)	○
	XA-5651A	×	○	○
Galvanic Corrosion Resistant	AA1221-G2-1	×	Under Investigation	○
	AA1101-S	○	○	○
Elastic	FA-750	Under Investigation	○ (Not VOC Compliant)	Under Investigation
	AA07	○	○	○
Fast Curing	AA2201-A	Under Investigation	○	○
Sintering (Pressure Type)	AA1901-EP1	○	○	○
Sintering (Non-Pressure Type)	AA1901-EN3	○	○	○
	AA1901-JE1	○	○	○



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*Additional adhesive materials not listed in this catalogue are also available.

*Please inquire for custom materials.

Catalogue Revision History (Not for publication)

Date of Revision	Contents of Revision
2021/5/19	Initial version
2022/7/12	Removed: Low Temp. Curing Type: AA2121-A, AA2101-A, AA2101-B, AA2001-C Narrow Pitch Electrode Type XA-5630 Sintering in Resin AA1901-H
	Added: Low Temp. Curing Type AA2121-M Series, AA2001-D High Heat Resistance Type AA1221-R, AA1301-B1 High Adhesion Type AA1229-A, AA1221-P Non-Pressure Sintering AA1901-B, AA1901-J Insulating Type AZ2121-N1, AZ1221-T2, AZ2151-H3
	Revised “Sintering in Resin Type” to “Non-Pressure Sintering Type” Added Application “LED Elements,” “Flexible Beacon” Added Application “Ceramic Package”
2023/4/27	Removed: Low Temp. Curing Type AA2121-D, Elastic Type XA-9521N, High Adhesion Type AA1229-A Non-Pressure Sintering Type AA1901-B, AA1901-J Fast Curing Type AA2221-A
	Added: Low Temp. Curing Type AA2001 Series, Elastic Type AA1101-S, Non-Pressure Sintering Type AA1901-E1, AA1901-JE1
	Added: Application Example “Power Semiconductor”
2023/9/12	Removed: Non-Pressure Sintering Type AA1901-E1
	Added: Sintering Type (Pressure) AA1901-EP1, Sintering Type (Non-Pressure) AA1901-EN1
2025/5/1	General overhaul of product lineup, update to formatting.