Dexerials

Technical Data Sheet

〈EMC Shielding Adhesive Tapes〉

Metal foil type tapes	AL7080・CU7040
Metal foil type conductive tapes	CU7636R・CU7636D
Conductive adhesive transfer tapes	T4420W
Conductive adhesive double coated tapes	AL7620・AL7621
Metal foil type conductive tapes	AL7650

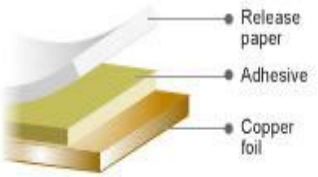
Features

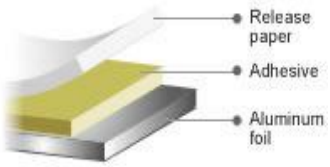
■Suitable for the shielding use in housing of mobile devices. Offers wide ranging solutions with the combination of metallic foil and adhesive.

AL7080: Shiny aluminum foil with single coated adhesive
CU7040: Electrolytic copper foil with single coated adhesive
CU7636R: Rolled copper foil with single coated conductive adhesive to enable conduction in the thickness direction
CU7636D: Electrolytic copper foil with single coated conductive adhesive to enable conduction in the thickness direction
AL7650: Aluminum foil with shingle coated conductive adhesive
AL7620・AL7621: Aluminum foil with double coated conductive adhesive
T4420W: Conductive adhesive transfer tape (non-carrier type)

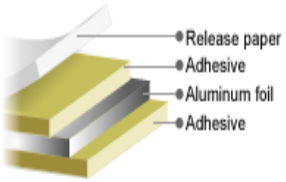
Structure

<Single coated type>





<Double coated type>



<Non-carrier type>

Product name	CU7040	AL7080	CU7636R	CU7636D	AL7650	AL7620	AL7621	T4420W *
Type	Single coated	Single coated	Single coated	Single coated	Single coated	Double coated	Double coated	Non-carrier
Main component	Acrylic	Acrylic	Conductive acrylic	Conductive acrylic	Conductive acrylic	Conductive acrylic	Conductive acrylic	Conductive acrylic
Carrier	Electrolysis copper foil 35μm	Soft aluminum foil 80μm	Rolling copper foil 35μm	Electrolysis copper foil 35μm	Soft aluminum foil 50μm	Soft aluminum foil 20μm	Soft aluminum foil 20μm	Non-carrier
Color	Copper	Aluminum	Copper	Copper	Aluminum	Aluminum	Aluminum	Black
Adhesive thickness(μm)	About 85	About 120	About 70	About 70	About 75	About 70	About 50	About 35
Release paper thickness (μm)	About 115	About 115	About 115	About 115	About 120	About 120	About 120	About 115 + 115
Bonding strength (N/20mm) *2	26	20	7	8	11	9	8	6
St'd size (width × length)	500mm ×50m	500mm × 50m	500mm × 25m	500mm × 25m	500mm × 50m	500mm × 50m	500mm × 50m	500mm × 100m

* T4420Wis with both side release paper.
*2 180° peeling strength

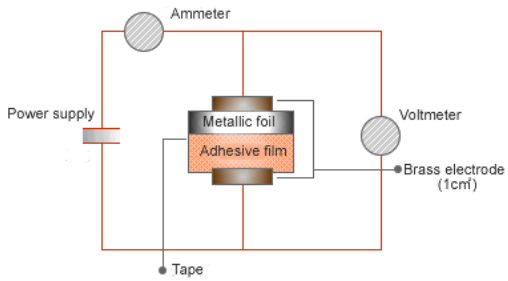
Suitable use

- Ideal for shielding the interior of mobile devices such as computers cellular phones.
- Ideal for heat and light reflection use.

Technical data

1. Resistance of each product

＜Measuring method＞



Adjust the ampere to 0.1A power supply, then measure the voltage between both electrodes to compute the resistance with a formula, R=E/I.

＜Results＞

Voltage	CU7040	AL7080	CU7636R	CU7636D	AL7650	AL7620	Al7621	T4420W
Resistance (Ω) *Thickness direction	—	—	0.07	0.07	0.30	0.40	0.20	0.07

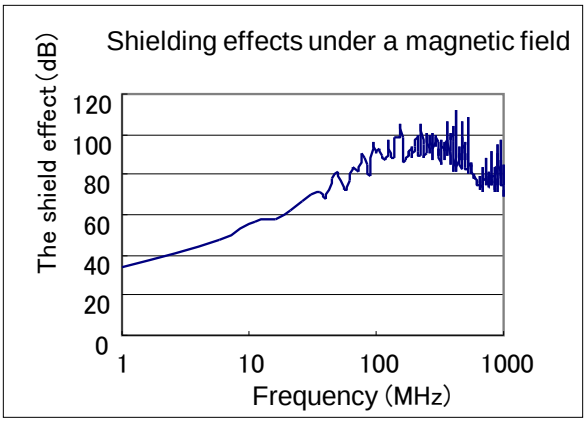
2. The shielding effects of each product

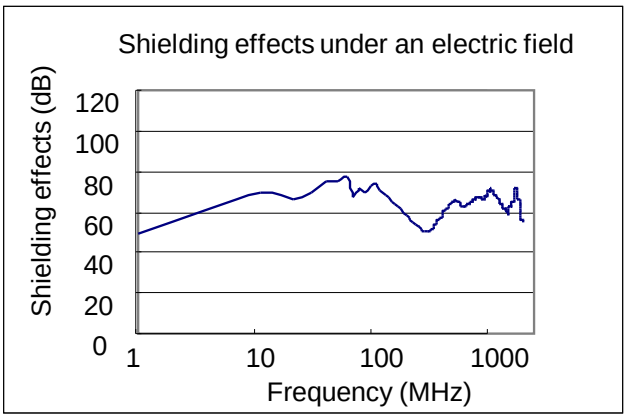
＜Measuring method＞
Shielding effects of the products under a magnetic or electric field were measured using a device for measuring electromagnetic wave shielding effect (the KEC method).

＜Results＞

	Voltage	CU7040	AL7080	CU7636R	CU7636D	AL7650	AL7620
Shielding effects under an electric field (dB)	30MHz	64	70	69	73	70	73
	100MHz	87	79	73	69	84	76
	300MHz	86	82	50	50	68	73
Shielding effects under a magnetic field (dB)	30MHz	71	58	70	68	62	52
	100MHz	68	65	90	78	63	64
	300MHz	70	70	96	83	68	67

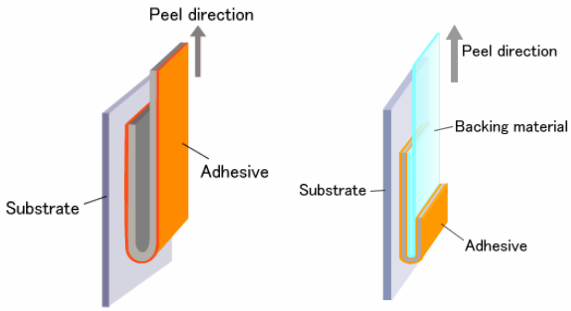
＜Shielding effects of CU7636R＞





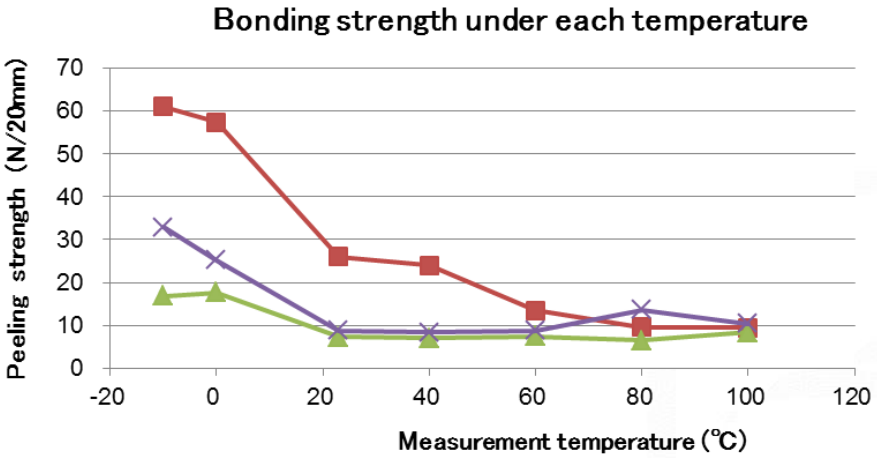
3. Bonding strength under each temperature (180° peeling strength)

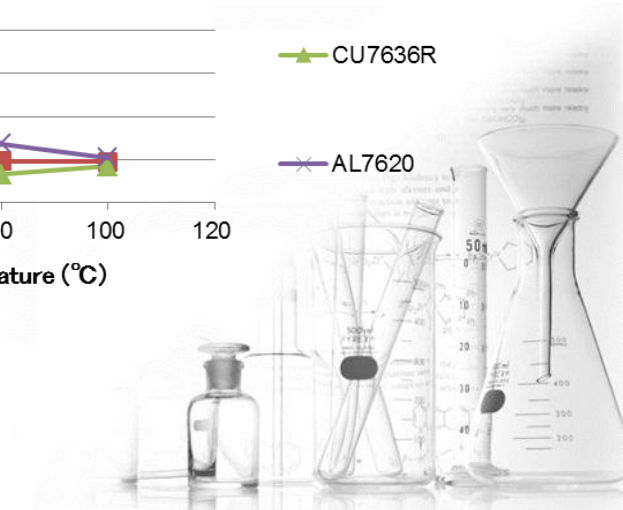
＜Test piece condition＞
Substrate: Stainless steel plate (SUS304)
Tape width: 20mm
Bonding condition: One stroke with 2-kg roller
Measurement temperature: -10℃ ~ 100℃
Peeling speed: 300mm/min
Backing material: 25μmPET (AL7620 Only)
[Left at RT for one day and then at each temperature for 30 minutes before measurement.]



＜180° peeling strength test＞

＜Results＞



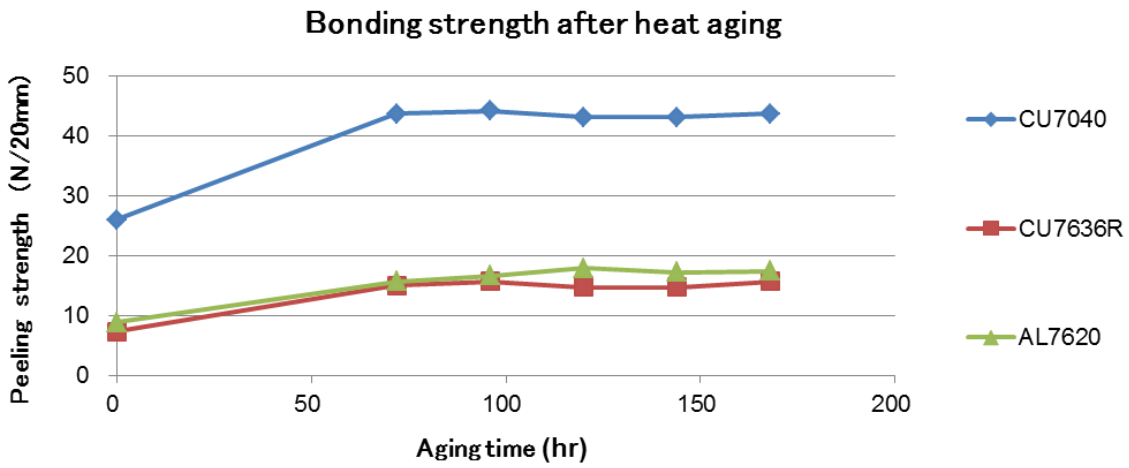


4. Reliability of bonding strength after adhesion under different conditions (180° peeling strength)

＜Test piece condition＞
Substrate: Stainless steel plate (SUS304)
Tape width: 20mm
Bonding condition: One stroke with 2-kg roller
Measuring condition: 23℃±5℃ 60%±20% RH
Peeling speed: 300mm/min

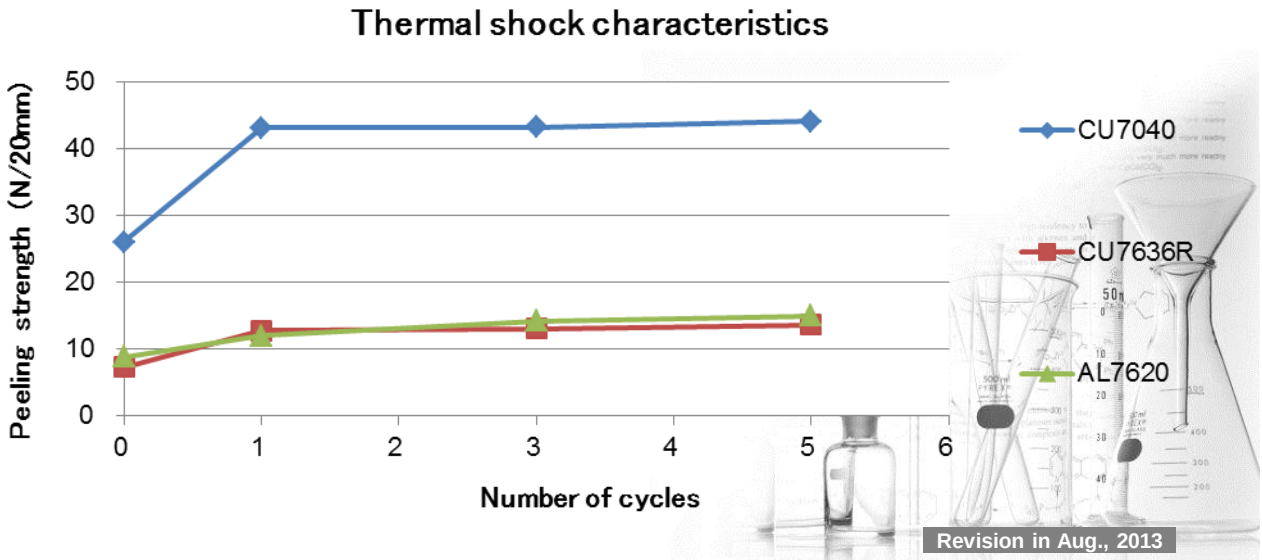
4-1. Bonding strength after heat aging

[Left at the temperature of 70℃. Measure bonding strength after 72 to 168 hours heat aging.]



4-2. Thermal shock characteristics

[Left at RT for one hour before thermal shock.
1cycle: -20℃× 3 hr. ⇔ 25℃× 15 min. ⇔ 70℃× 3 hr.
Measure bonding strength after 1 to 5 cycles.]



Revision in Aug., 2013

Note on the characteristic data given— Data on the characteristics of the products described in this catalog are based on the results of evaluations carried out by the company. This does not guarantee that the characteristics of the product conform with your usage environment. Before use, review the usage conditions based on evaluation data obtained from the equipment and substrates actually used.

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