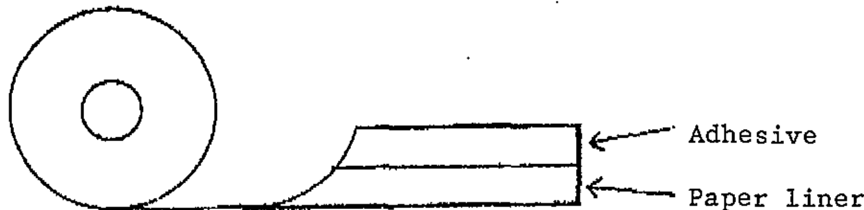
HEAT-RESISTING DOUBLE-COATED ADHESIVE TAPE (No. 5915)

Development Group
Bonding and Jointing Products Division

1. Outline

The newly developed heat-resisting double-coated adhesive tape No.5915 has no substrate, has high heat resistance, and excels in adhesion strength and chemical resistance. It contains least volatile components which may be evolved from the adhesive, so that it can be used in the electric and electronic processes requiring high reliability, such as soldering process, chemical cleaning process after bonding. It has high processability. Fine processing is possible.

2. Structure



3. Advantages

(1) Excellent heat resistance (the tape can be used in soldering process).
(2) Excellent chemical resistance (the tape can be used in various cleaning processes).
(3) Minimized volatile gas content
(4) High adhesion strength, high durability and reliability
(5) High processability and workability

4. Uses

(1) For fixing of FPC
(2) For heat-resisting uses

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5. Specification of Tape

5.1 General Specification

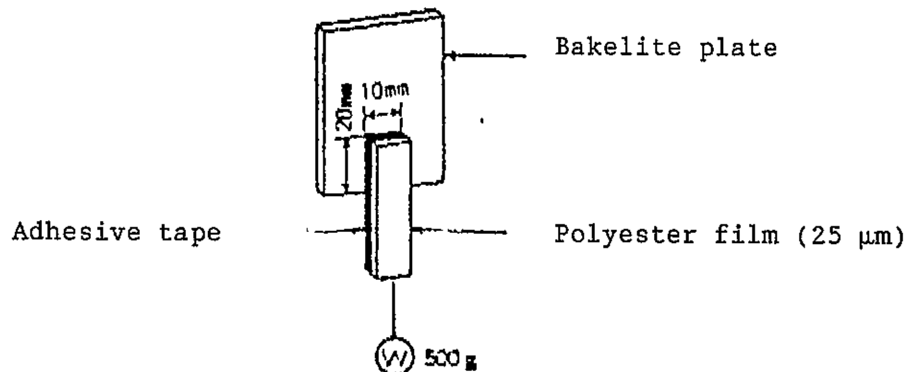
Item No. 5915 Competitive items A and B

Item		No. 5915	Competitive item A	Competitive item B
Thickness (mm)	Adhesive	0.05	0.05	0.05
	Separator	0.12	0.09	0.11
Substrate		None	None	None
Adhesion* (g/20 mm)	Stainless steel plate	1150	850	1050
	Aluminum plate	1100	850	1100
	Polyester film	750	750	600
	Polyimide film	750	750	750
	Bakelite plate	1050	950	1000
Holding strength (mm/2 hrs.)**		0.0	0.9	0.1

Testing methods

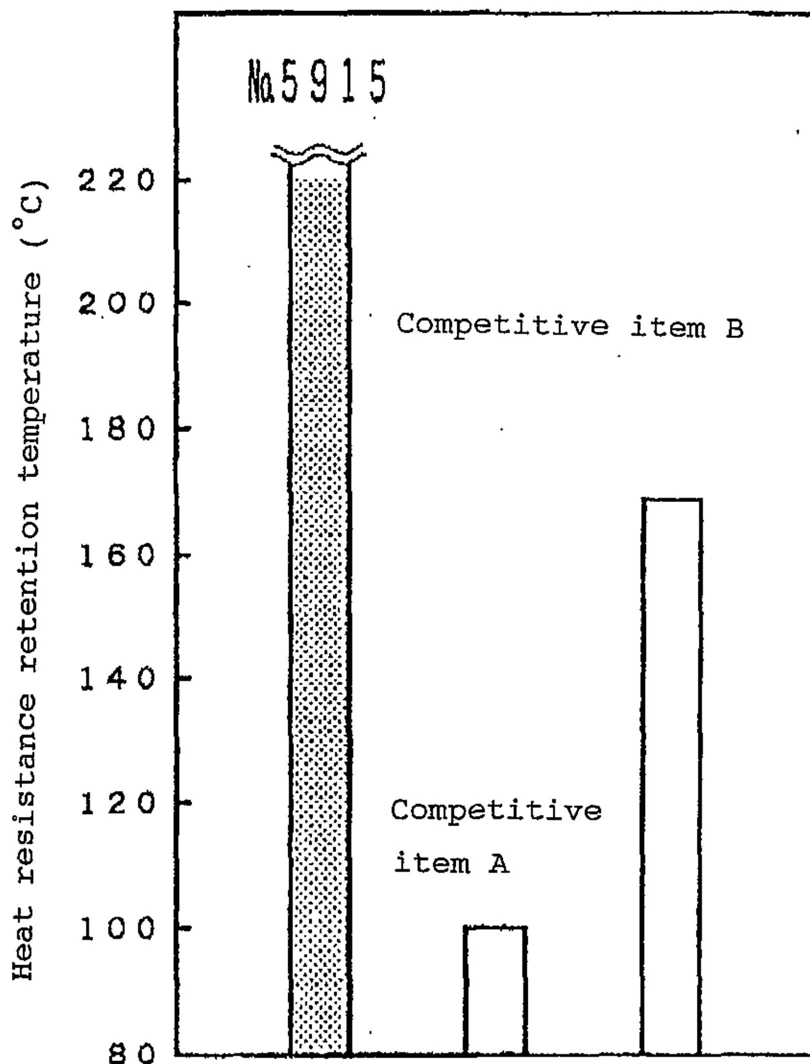
* Adhesion
180° peeling,
Stretching speed: 300 mm/min
Measurement temperature: 23°C (backing with 25 µm PET film)

** Holding strength
Tape is applied to the sample, and the sample is held for 2 hrs. at 40°C under a load of 500 g. Then the displacement is measured.



5.2 Heat Resistance

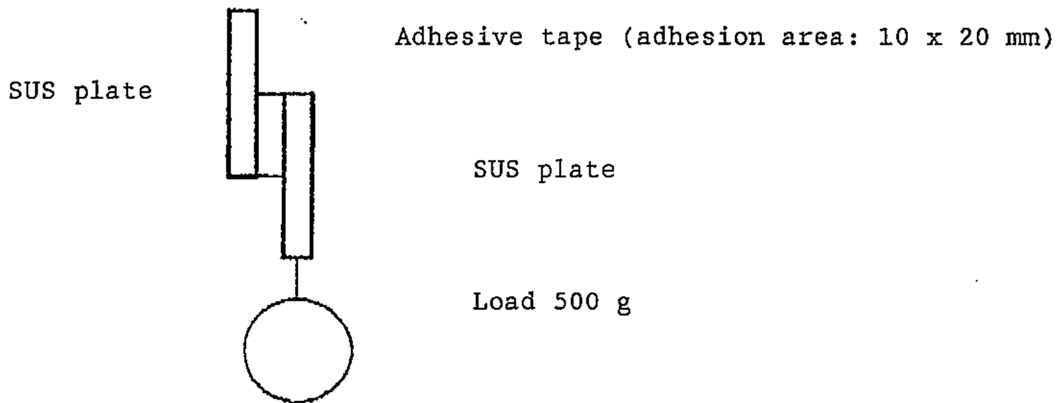
Heat resistance retention



Heat resistance retention temperature

Testing method

The adhesive tape is applied to the stainless steel plate (adhesion area: 10 x 20 mm). After aging for 30 minutes in atmosphere at specific temperature, a weight of 500 is hung. The upper limit temperature at which the sample is held for 2 hrs. or more is measured and recorded.

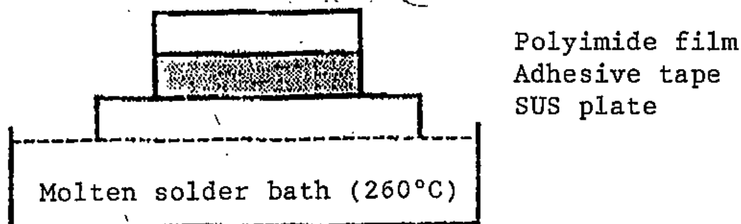


Solder heat resistance test

Tape sample	260°C, 10 sec	260°C, 30 sec
No. 5915	Blister and disbondment were not observed.	Blister and disbondment were not observed.
Competitive item A	Blister and disbondment were observed.	Blister and disbondment were observed.
Competitive item B	Blister and disbondment were not observed.	Blister and disbondment were not observed.

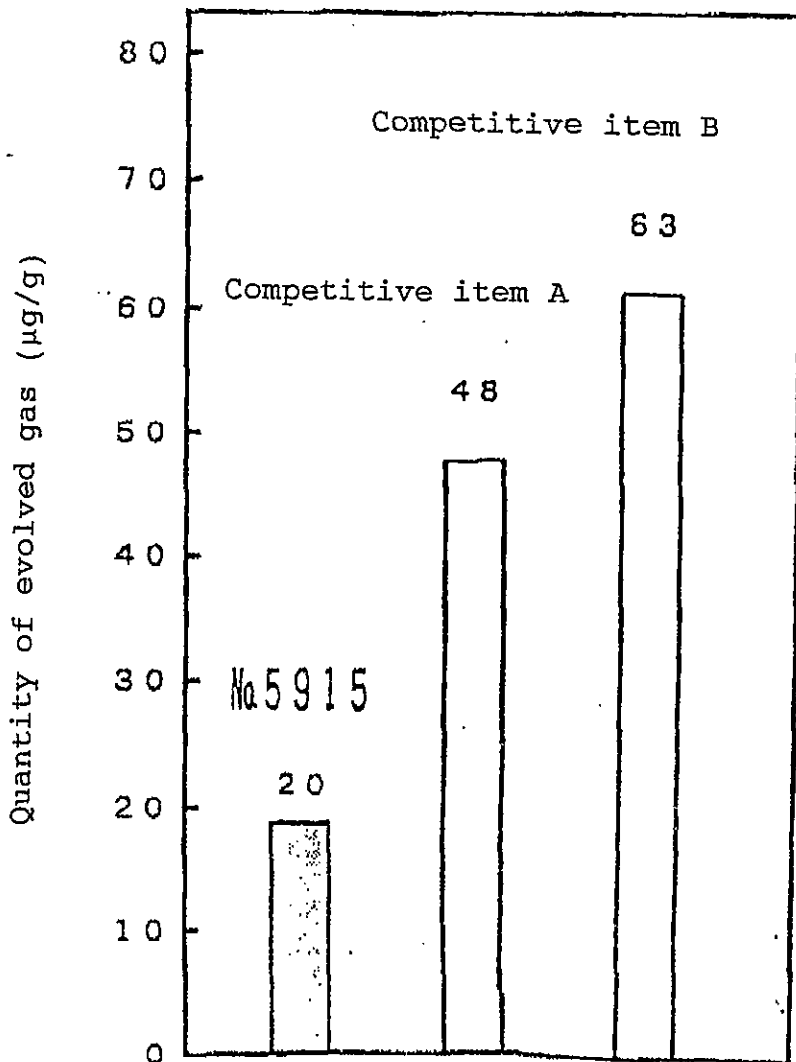
Testing method

The tape is applied to the polyimide film 25 μm thick, and it is fitted to the SUS plate. The specimen is put on the molten solder bath (260°C) for specific time with the SUS plate upward, and then the specimen is taken out to examine its state.



5.3 Volatile Gas Content

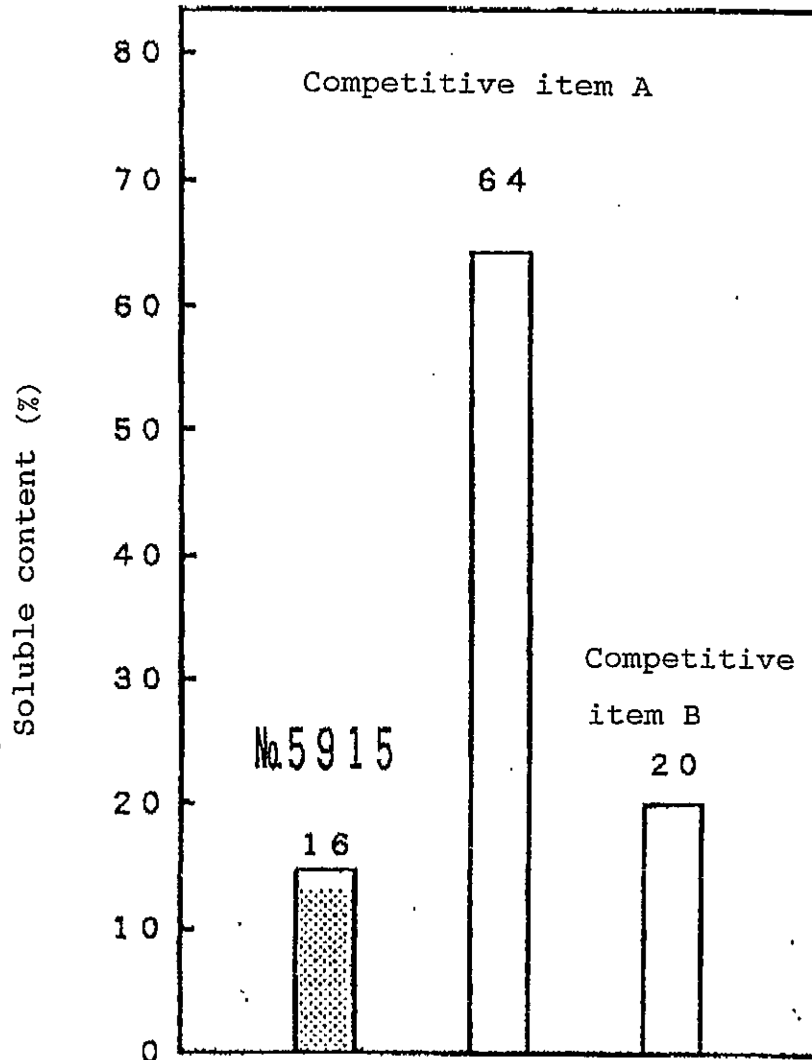
Out-gas test result



Testing method

Quantity of gas evolved when the adhesive is heated for one hour at 85°C is analyzed with gas chromatography.

5.4 Solvent Resistance



Testing method

Approx. 1 g of adhesive is taken and weighed accurately, and then it is immersed in acetic ether. After holding for one week at normal temperature (23°C) the unsolved component is taken by filtration with nylon mesh filter. After drying the weight is measured to calculate the content of eluted components.

6. Others

The technical data shown herein are typical and should not be used for any specification purposes.