



Technical Data Sheet

Tape and Adhesive

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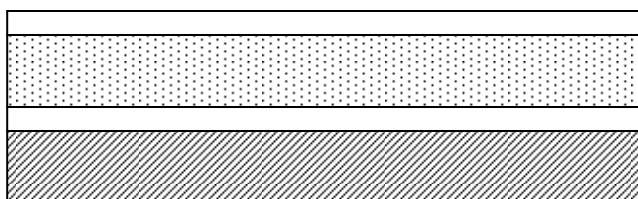
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Scotch Brand VHB plus™ Product Y-4545 series (Halogen free flame retardant type)

1. Product Description

VHB plus™ halogen free flame retardant tapes Y-4545 series have the UL94V0 rating for flame retardant property, in addition to excellent properties that conventional VHB have. Y-4545 series has good static shear, peel adhesion. It has also resistance to solvents, UV light and elevated temperature. This product can be used for the application that requires the flame retardant property for the bonding.

2. Construction



Acrylic adhesive

Acrylic foam

Acrylic adhesive

Paper liner

3. Advantages

1. UL94V0 rating for flame retardant property (file number: E176845)
2. High adhesion strength
3. Good heat resistance and durability

4. Physical property

Products No.		Y- 4545-05	Y- 4545-07	Y- 4545-10	Y- 4545-13
Color		Gray			
Thickness	VHB (mm)	0.5	0.7	1.0	1.3
	Liner(mm)	0.13			
Flame retardant		UL94V0			

Test Method

Thickness: Using thickness gauge with caliper foot of 5mm diameter (JIS S 0237)

5. Adhesion property

Products No.	Y- 4545-05	Y- 4545-07	Y- 4545-10	Y- 4545-13
90° Peel Adhesion (N/cm)	21	21	41	37
T-Peel Adhesion (N/cm)	10	11	17	18
Dynamic Shear Strength (N/cm ²)	141	121	85	74
Dynamic tensile strength (N/cm ²)	78	69	49	40
Share holding power (90C, min)	0.7	0.7	1.1	1.2

Test Method

90°C Peel Adhesion:

Tape between stainless steel and anodized aluminum foil, Roll down twice in each direction using 10kg steel roller, 72 hours dwell at room temperature, Testing speed 300 mm/min

T-Peel Adhesion:

Using anodized aluminum foil. Roll down twice in each direction using 10kg steel roller. 72 hours dwell at room temperature, Testing speed 300 mm/min.

Dynamic Shear Strength:

To stainless steel, Roll down twice in each direction using 10kg steel roller. 72 hours dwell at 23 degree C. Testing speed 300 mm/min,

Dynamic Tensile Strength:

To stainless steel block, Apply pressure by 10kg weight for 30sec. 72 hours dwell at 23 degree C. Testing speed 50 mm/min

6. 90 degree Peel Adhesion to each substrate

Products No.	Y- 4545-05	Y- 4545-07	Y- 4545-10	Y- 4545-13
Substrates				
Stainless steel (304BA)	21	21	41	37
Aluminum	21	21	40	36
Galvanized steel	20	21	38	35
ABS	20	20	38	35
Acrylic	20	20	37	35
Polyethylene	3	3	4	4
Poly propylene	6	6	7	8
Glass	20	21	37	36

Test Method

Tape between substrate and anodized aluminum foil
Roll down twice in each direction using 10kg steel roller.
72 hours dwell at room temperature.
Testing speed 300 mm/min

7. Electrical property (data for Y-4545-10)

Item	Data	Test method
Volume electrical resistivity (Ohm-cm)	1.7×10^{13}	JIS K 6249
dielectric breakdown voltage (KV/mm)	7.0	JIS K 6249

8. Other information

1. Clean up oil and water dust on the substrates before bonding.
2. Applying pressure (more than 5kg/cm²) and dwelling (more than 72 Hrs) are recommended.
3. Over 15degree C is recommended for operating temperature.
4. Primer can be use for some material that difficult to adhere
5. Recommended storage condition is lower than 30C and lower than 70% RH, without direct sun light

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