

3M™ Acrylic Foam Tape GT7100

Technical Data Sheet



Description

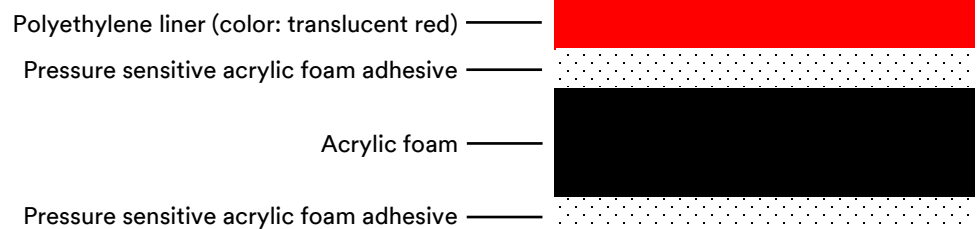
3M™ Acrylic Foam Tape GT7100 Series, which is made by a special process, has a superior adhesion performance and high flexibility. This tape is specially designed for exterior and interior parts attachments of automobiles. GT7100 series provides equivalent adhesion properties to conventional acrylic foam tape and comparable initial adhesion performance at low ambient temperature with Hi-Tack Acrylic Foam Tapes designed to an improvement of low temperature workability.

- Excellent adhesive performance at low temperatures in comparison with those of the conventional acrylic foam tape.
- Follows the shrinkage and elongation of the plastic part caused by the temperature change, and has good stress relaxation properties which are very important for the automotive parts attachments.
- Has a high final adhesion and peel strength.
- Excel in a variety of weather, solvent and high temperature resistance.

Applications

Body side molding, weather strip, bumper molding, roof molding, window molding, emblem, door edge molding, end rubber, pad protector, mud guard, big side protector, side visor, etc.

Product Construction



Physical Properties

Product No.	Thickness	Color
GT7102	0.2 mm	Gray
GT7104	0.4 mm	
GT7106	0.6 mm	
GT7108	0.8 mm	
GT7110	1.0 mm	
GT7112	1.2 mm	
GT7116	1.6 mm	
GT7120	2.0 mm	
GT7125	2.5 mm	
GT7130	3.0 mm	White
GT7135	3.5 mm	
GT7140	4.0 mm	

Liner thickness is not included. The adhesive of the liner side is the same as the non-liner side.

Typical Performance Properties (vol. 1)

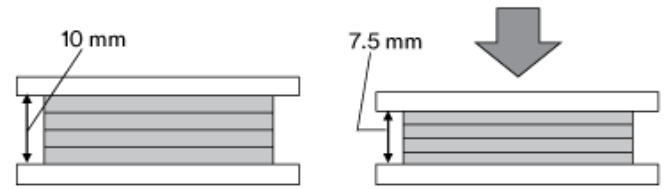
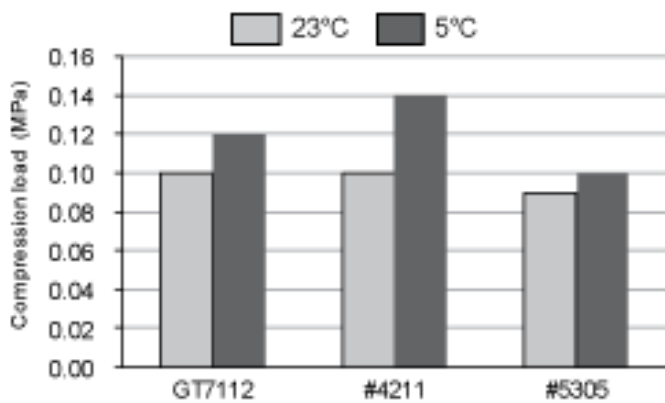
		Product No.	GT7112	(Ref.) #5305	(Ref.) #4211
		Thickness (mm)	1.2	1.2	1.2
180° Peel Strength (N/cm)	Painted panel*	Initial state	11.4	11.4	10.6
		Normal state	14.9	14.9	14.9
		At high temperature	8.1	7.8	8.2
		Heat aging	19.7	19.2	20.0
		Warm water immersion	16.5	15.7	16.9
	PVC panel**	Initial state	16.9	15.7	16.9
		Normal state	17.0	15.7	17.2
		At high temperature	8.5	7.8	8.6
		Heat aging	16.2	15.3	16.5
		Warm water immersion	16.2	15.3	16.5
Shear Strength (MPa)	Painted panel* and PVC panel**	Initial state	0.61	0.54	0.63
		Normal state	0.61	0.55	0.63
		At high temperature	0.20	0.19	0.21
		Heat aging	0.58	0.53	0.60
		Warm water immersion	0.58	0.53	0.60
		Gasoline immersion	0.60	0.54	0.62
		Wax remover immersion	0.53	0.47	0.55

*Painted panel: White color painted panel used on a vehicle.

**PVC panel: N-200 adhesion promoter is applied on the PVC panel.

Typical Performance Properties (vol. 1)

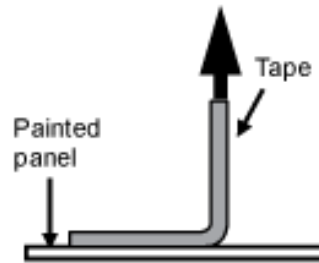
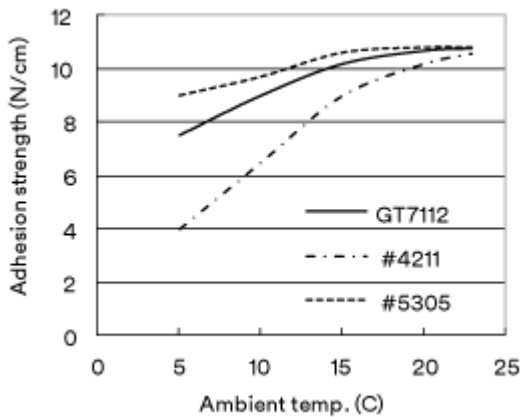
Compression Load



Pile 25 mm by 25 mm tapes to a thickness of approximately 10 mm, and measure load by compression test machine in 10 mm/minute test speed when it is compressed to 25% of the thickness in total.

Test Methods

90° Peel



Tape size: 10 mm width
 Pressurizing: 2 kg roller one-way
 Test temp.: 5, 10, 15, 20, 23°C
 Peel speed: 300 mm/min.

Typical performance (vol. 2)

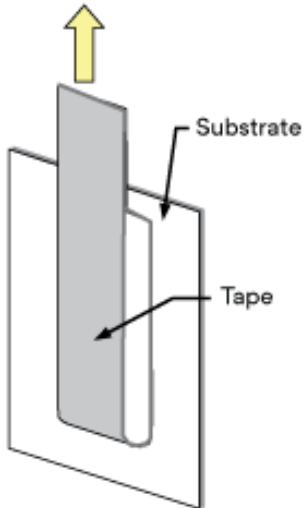
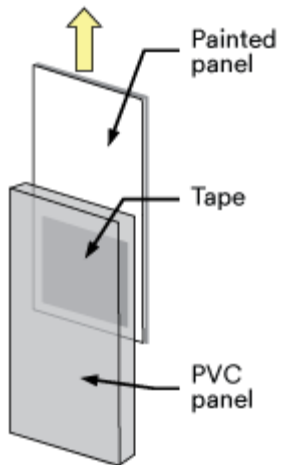
		Product No.	GT7102	GT7104	GT7106	GT7108	GT7110	GT7112
		Thickness (mm)	0.2	0.4	0.6	0.8	1.0	1.2
180° Peel Strength (N/cm)	Painted panel*	Initial state	6.9	8.5	9.4	10.2	10.8	11.4
		Normal state	8.2	11.0	11.5	12.6	13.7	14.9
		At high temperature	5.2	6.1	7.0	7.5	7.7	8.1
		Heat aging	12.7	14.2	15.8	17.4	18.2	19.7
		Warm water immersion	9.9	12.1	13.5	15.3	15.9	16.5
	PVC panel**	Initial state	10.5	12.0	13.0	14.2	15.5	16.9
		Normal state	11.8	12.8	13.8	14.7	16.0	17.0
		At high temperature	5.5	6.2	7.2	8.1	8.3	8.5
		Heat aging	4.0	8.0	10.9	13.4	15.0	16.2
		Warm water immersion	9.1	10.8	12.5	14.0	15.0	16.2
Shear Strength (MPa)	Painted panel* and PVC panel**	Initial state	0.84	0.75	0.73	0.70	0.66	0.61
		Normal state	0.86	0.79	0.75	0.71	0.65	0.61
		At high temperature	0.28	0.24	0.23	0.22	0.21	0.20
		Warm water immersion	0.84	0.75	0.71	0.67	0.63	0.58
		Gasoline immersion	0.83	0.75	0.72	0.69	0.63	0.60
		Wax remover immersion	0.75	0.69	0.64	0.61	0.58	0.53

		Product No.	GT7116	GT7120	GT7125	GT7130	GT7130	GT7135
		Thickness (mm)	1.6	2.0	2.5	3.0	3.5	4.0
180° Peel Strength (N/cm)	Painted panel*	Initial state	12.4	12.7	13.4	13.8	14.8	15.3
		Normal state	16.1	17.4	19.2	21.2	23.5	25.3
		At high temperature	8.4	8.6	9.0	9.4	9.4	9.6
		Heat aging	22.2	24.5	26.8	29.6	31.4	32.1
		Warm water immersion	19.3	21.2	23.5	25.7	27.2	28.9
	PVC panel**	Initial state	19.2	20.9	23.5	24.3	24.6	25.8
		Normal state	19.2	21.0	23.3	24.5	25.1	25.9
		At high temperature	9.3	9.5	9.7	10.2	10.5	10.5
		Heat aging	18.6	20.5	23.2	26.0	29.0	31.1
		Warm water immersion	18.6	20.3	22.1	24.8	27.0	28.7
Shear strength (MPa)	Painted panel* and PVC panel**	Initial state	0.56	0.52	0.48	0.47	0.45	0.45
		Normal state	0.56	0.52	0.49	0.47	0.45	0.45
		At high temperature	0.19	0.18	0.17	0.16	0.15	0.15
		Warm water immersion	0.53	0.49	0.47	0.46	0.44	0.42
		Gasoline immersion	0.52	0.48	0.47	0.45	0.44	0.44
		Wax remover immersion	0.47	0.43	0.40	0.40	0.39	0.38

*Painted panel: White color painted panel used on a vehicle.

**PVC panel: N-200 adhesion promoter is applied on the PVC panel.

Test methods

Thickness	Measured by a thickness gauge	
180° Peel Strength	<p>Peel off the tape in 180° direction and measure the adhesion strength to the substrate with a tensile strength test machine after the exposures in the following conditions:</p> <ol style="list-style-type: none"> Initial state: 23°C x 20 min. Normal state: 23°C x 24 hrs. At high temperature: b → at 80°C Heat aging: b → at 80°C x 336 hrs. → b Warm water immersion: b → 40°C water x 336 hrs. → b <ul style="list-style-type: none"> • Substrate: Painted panel and PVC panel • Tape size: 25 mm width • Tape backing: 25 µm PET film • Rolling pressure: 5 kg roller one-way • Peeling speed: 50 mm/min 	 <p>180 degree peeling</p>
Shear Strength	<p>Measure the strength needed to shear.</p> <ol style="list-style-type: none"> a, b, c, e: same as the conditions of 180° peel strength f. Gasoline immersion: b → gasoline x 1 hr. → b g. Wax-remover immersion: b → was-remover x 1 hr. → b <ul style="list-style-type: none"> • Substrate: Painted panel and PVC panel • Tape size: 25 mm x 25 mm • Rolling pressure: 5 kg roller one-way • Tensile speed: 50 mm/min. 	 <p>Shear strength</p>

Shelf Life

XXXXXXXXXX from the date of receipt by customer when stored at 4°C–38°C (40°F–100°F) and 0–95% relative humidity (RH). The optimum storage conditions are 22°C (72°F) and 50% relative humidity.

Regulatory Information

To obtain published IMDS ID numbers, email requests to 3M-IMDSrequest@mmm.com.

Contact Information

The information provided in this technical document is intended as a guide for this product. For more information or help in selecting a 3M product for an application, please contact your 3M application engineer or call product application support at 1-800-328-1684.

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Automotive and Aerospace Solutions Division

3M Center
St. Paul, MN 55144-1000
1-800-328-1684
3M.com/autosolutions

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