



WSS-M99P48-B3

Pressure Sensitive Adhesive Tape

(Interior, Exterior and Underhood Applications)

Automotive Interior Spec Testing

Technical Bulletin rev 2

March 2024

3M tested the following adhesive tapes to the Automotive OEM Spec: WSS-M99P48-B3. The results of the testing are provided in the following information. Adhesives and foams not listed on this document have not been tested to this spec.

Automotive specification testing was performed on lab substrates and not on actual automotive production parts. Additional testing by the converter, tier or supplier is needed to show that parts and adhesives meet such specification. Please carefully read the latest revision of the automotive specification for further information.

Revision	Date	Comments
Revision 2	March 2024	Removed 59812LVC & 56815LVC
Revision 1	January 2024	Testing to 300MP+ adhesives
Original release	April 2021	Initial testing and bulletin completed

3M™ Adhesive Transfer Tape 9472LE

3M™ Double Coated Tape 93015LE

*3M™ Adhesive Transfer Tape 6035PC+/PL+

*3M™ Adhesive Transfer Tape 9775WL+

*3M™ Double Coated Tape 9832+/9832HL+

3M™ Adhesive Transfer Tape 950/9472

3M™ Adhesive Transfer Tape 9627

Note: Data reported in this technical bulletin, for all test methods, is the average of three replicates using one typical lot of adhesive

Note: *Initial dwell is 72 hours at 72°F for products with an *

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Test	Test Condition / Environment	
180° Peel Adhesion 300mm / 12 inch per min	Initial	72 hours @ room temp 23°C / 73°F
	Heat Aged	168 hours @ 100°C / 212°F
	Environmental Cycle	10 cycles 4 hours @ 100°C / 212°F 4 hours @ 38°C / 100°F 16 hours @ -30°C

9472LE

Initial – 20 minutes @ 23°C / 73°F						
9472LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP Panel			Foam Broke	
	Polyether				Foam Broke	
	Microcellular				Foam Broke	
	Crushed EPDM	Rigid ABS Panel			Foam Broke	
	Polyether				Foam Broke	
	Microcellular				Foam Broke	

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Heat Aged – 168 hours @ 100°C / 212°F						
9472LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement Max 25% loss from initial					
	Crushed EPDM	Rigid PP Panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	

Environmental Cycle – 10 cycles						
9472LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement Max 25% loss from initial					
	Crushed EPDM	Rigid PP Panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	

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93015LE

Initial – 20 minutes @ 23°C / 73°F						
93015LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP Panel	0.33	30.41	Slight foam tear	
	Polyether		0.45	41.46	Clean peel from foam	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Panel			Foam broke	
	Polyether		0.42	39.04	Clean peel from foam	
	Microcellular				Foam broke	

Heat Aged – 168 hours @ 100°C / 212°F						
93015LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max loss from initial					
	Crushed EPDM	Rigid PP Panel			Foam broke	
	Polyether		0.50	46.40	Slight foam tear	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Panel			Foam broke	
	Polyether		0.50	46.42	Clean peel from foam	
	Microcellular				Foam broke	

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Environmental Cycle – 10 cycles						
93015LE	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max loss from initial					
	Crushed EPDM	Rigid PP Panel			Foam broke	
	Polyether		0.39	36.01	Clean peel from foam	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Panel			Foam broke	
	Polyether		0.39	36.01	Clean peel from foam	
	Microcellular				Foam broke	

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6035PC+/PL+

*Initial – 72 hours @ 23°C / 73°F						
6035 PC+/PL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP panel			Foam tear	
	Polyether				Foam broke	
	Microcellular		0.32	29.55	Clean peel from PP	
	Crushed EPDM	Rigid ABS panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam tear	

Heat Aged – 168 hours @ 100°C / 212°F						
6035 PC+/PL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max loss from initial					
	Crushed EPDM	Rigid PP panel			Foam tear	
	Polyether				Foam broke	
	Microcellular		0.70	64.60	Clean peel from PP	
	Crushed EPDM	Rigid ABS panel			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	

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Environmental Cycle – 10 cycles						
6035 PC+/PL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max loss from initial					
	Crushed EPDM	Rigid PP Plaque	0.47	44.16	Clean peel from PP	
	Polyether				Foam broke	
	Microcellular		0.42	39.46	Clean peel from PP	
	Crushed EPDM	Rigid ABS Plaque			Foam tear	
	Polyether				Foam broke	
	Microcellular				Foam broke	

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9775WL+

*Initial – 72 hours @ 23°C / 73°F					
	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation
9775WL+	Requirement 0.48 N/mm; 43.85 oz/in				
	Crushed EPDM	Rigid PP Plaque			Foam tear
	Polyether				Foam broke
	Microcellular		0.23	21.59	Clean peel from PP
	Crushed EPDM	Rigid ABS Plaque			Foam tear
	Polyether				Foam broke
	Microcellular				Foam broke

Heat Aged – 168 hours @ 100°C / 212°F					
	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation
9775WL+	Requirement -25% max from initial				
	Crushed EPDM	Rigid PP Plaque			Foam broke
	Polyether				Foam broke
	Microcellular		0.50	46.81	Clean peel from PP
	Crushed EPDM	Rigid ABS Plaque			Foam tear
	Polyether				Foam broke
	Microcellular				Foam broke

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Environmental Cycle – 10 cycles						
9775WL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max from initial					
	Crushed EPDM	Rigid PP Plaque	0.27	24.82	Clean peel from PP	
	Polyether		0.35	32.54	Clean peel from PP	
	Microcellular		0.66	61.74	Clean peel from PP	
	Crushed EPDM	Rigid ABS Plaque			Foam broke	
	Polyether				Foam broke	
Microcellular				Foam broke		

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9832+ / 9832HL+

*Initial – 72 hours @ 23°C / 73°F						
9832+ 9832HL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP Plaque			Foam Tear	
	Polyether				Foam broke	
	Microcellular		0.21	19.54	Clean peel from PP	
	Crushed EPDM	Rigid ABS Plaque			Foam tear	
	Polyether				Foam broke	
	Microcellular				Foam broke	

Heat Aged – 168 hours @ 100°C / 212°F						
9832+ 9832HL+	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max from initial					
	Crushed EPDM	Rigid PP Plaque	0.50	46.29	Clean Peel from PP	
	Polyether				Foam broke	
	Microcellular		0.21	19.44	Clean peel from PP	
	Crushed EPDM	Rigid ABS Plaque			Foam tear	
	Polyether				Foam broke	
	Microcellular				Foam broke	

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	Environmental Cycle – 10 cycles				
	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation
9832+ 9832HL+	Requirement -25% max from initial				
	Crushed EPDM	Rigid PP Plaque	0.44	40.62	Clean Peel from PP
	Polyether				Foam Broke
	Microcellular		0.24	22.49	Clean Peel from PP
	Crushed EPDM	Rigid ABS Plaque			Foam Tear
	Polyether				Foam Broke
	Microcellular				Foam Broke

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950/9472

Initial – 20 minutes @ 23°C / 73°F						
950/9472	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP Plaque	0.26	24.12	Slight foam tear	
	Polyether		0.32	29.29	Clean peel from foam	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Plaque	0.26	23.77	Slight foam tear	
	Polyether		0.41	37.84	Clean peel from foam	
	Microcellular				Foam broke	

Heat Aged – 168 hours @ 100°C / 212°F						
950/9472	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max from initial					
	Crushed EPDM	Rigid PP Plaque			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Plaque			Foam broke	
	Polyether				Foam tear	
	Microcellular				Foam broke	

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Environmental Cycle – 10 cycles					
	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation
950/9472	Requirement -25% max from initial				
	Crushed EPDM	Rigid PP Plaque			Foam broke
	Polyether		0.42	38.97	Clean peel from PP
	Microcellular				Foam broke
	Crushed EPDM	Rigid ABS Plaque			Foam broke
	Polyether				Foam broke
	Microcellular				Foam broke

WSS-M99P48-A3: Foam Performance, Pressure Sensitive Adhesive Tape

9627

Initial – 20 minutes @ 23°C / 73°F						
9627	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement 0.48 N/mm; 43.85 oz/in					
	Crushed EPDM	Rigid PP Plaque			Foam broke	
	Polyether		0.54	49.76	Foam specs	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Plaque			Foam broke	
	Polyether				Foam tear	
	Microcellular				Foam broke	

Heat Aged – 168 hours @ 100°C / 212°F						
9627	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation	
	Requirement -25% max from initial					
	Crushed EPDM	Rigid PP Plaque			Foam broke	
	Polyether				Foam broke	
	Microcellular				Foam broke	
	Crushed EPDM	Rigid ABS Plaque			Foam broke	
	Polyether				Foam tear	
	Microcellular				Foam broke	

WSS-M99P48-A3: Foam Performance, Pressure Sensitive Adhesive Tape

Environmental Cycle – 10 cycles					
	Foam	Substrate	AVG Peel N/mm	AVG Peel oz/in	Observation
9627	Requirement -25% max from initial				
	Crushed EPDM	Rigid PP Plaque			Foam broke
	Polyether				Foam broke
	Microcellular				Foam broke
	Crushed EPDM	Rigid ABS Plaque			Foam broke
	Polyether				Foam broke
	Microcellular				Foam broke

Technical Information

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WSS-M99P48-A3: Foam Performance, Pressure Sensitive Adhesive Tape

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