



MATERIAL PROPERTY TEST REPORT

Test Standard: Chrysler MS-DB-50 (2015)

Material Type: Expanded Polypropylene Foam HB Series

Testing Completed & Certified by: MGA Labs. Greer, SC, USA (A2LA Cert. 850.02)

Product Type: A, B, C, D & E

2015

Physical Property Data

	Type (A)		Type (B)		Type (C)		Type (D)		Type (E)		Test Method
	(lb./cu.Ft.)		(lb./cu.Ft.)		(lb./cu.Ft.)		(lb./cu.Ft.)		(lb./cu.Ft.)		
Density Range Min & Max Density Tested	1.3 - 2.4		2.5 - 3.4		3.5-5.8		5.9-6.7		6.8-7.5		ASTM3575
	1.8		2.9		5		6.6		7.3		
Tensile Strength As Received 22 Hrs. @100°C 168 Hrs. @ 70°C & 100% RH	(lbs./in ²)	% Change	(lbs./in ²)	% Change	(lbs./in ²)	% Change	(lbs./in ²)	% Change	(lbs./in ²)	% Change	ASTM3575
	≥ 27	52	102	136	181	198	201	205	201	205	
	≤ 20	9	82	145	176	201	205	205	205	205	
	56	-9	88	14	132	3	184	-2	205	-4	
Tensile Elongation	%		%		%		%		%		ASTM3575
	≥ 7	8	≥ 7	12	≥ 7	9	≥ 6	8	≥ 6	10	
Tear Strength	(lbs./inch)	% Change	(lbs./inch)	% Change	(lbs./inch)	% Change	(lbs./inch)	% Change	(lbs./inch)	% Change	ASTM3575 Die C
	≥ 8	12	21	24	46	48	46	46	46	4	
	≤ 30	-3	20	26	43	7	43	7	46	4	
	11	7	21	27	47	-2	47	-2	46	4	
Compressive Strength As Received	(lbs./in ²)		(lbs./in ²)		(lbs./in ²)		(lbs./in ²)		(lbs./in ²)		ASTM3575
10%	≥ 5	15	≥ 20	26	≥ 40	57	≥ 62	98	≥ 86	120	
25%	≥ 10	22	≥ 25	39	≥ 49	74	≥ 83	126	≥ 117	144	
50%	≥ 17	33	≥ 40	53	≥ 67	103	≥ 101	178	≥ 158	204	
75%	≥ 45	67	≥ 80	99	≥ 145	210	≥ 269	381	≥ 385	533	
Max % Change @ 50% Stress 22 Hrs. @100°C	%		%		%		%		%		
50%	≤ 30	6	≤ 10	2	≤ 10	4	≤ 10	7	≤ 10	5	
Max % Change @ 50% Stress 168 Hrs. @ 70°C & 100% RH	%		%		%		%		%		
50%	≤ 30	4	≤ 10	-2	≤ 10	6	≤ 10	3	≤ 10	1	
Change in Volume 168 Hrs. @ 70°C & 100% RH	%		%		%		%		%		Standard
	≤ 2	-0.7	≤ 2	0.19	≤ 2	0.12	≤ 2	0.24	≤ 2	0.12	
Chemical Resistance Engine Oil, Transmission Fluid, Break Fluid, Power Steering Fluid, Undercoating, Gasoline	No Deformation	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Standard
CLTE - Coefficient Linear Thermal Expansion	≤ 6.5 x 10 ⁻⁵		8.1 x 10 ⁻⁶		≤ 5.5 x 10 ⁻⁵		1.9 x 10 ⁻⁵		≤ 5.5 x 10 ⁻⁵		ASTM D696
	≤ 5.5 x 10 ⁻⁵		2.1 x 10 ⁻⁵		≤ 5.5 x 10 ⁻⁵		1.32 x 10 ⁻⁵		≤ 5.5 x 10 ⁻⁵		
	≤ 5.5 x 10 ⁻⁵		3.2 x 10 ⁻⁵		≤ 5.5 x 10 ⁻⁵		3.2 x 10 ⁻⁵		≤ 5.5 x 10 ⁻⁵		
Flammability	Report Results	69	67	37	26	19					SAE J369

This certifies that the above material meets the requirements for the Production Part Approval Process per the Chrysler Material Standard MS-DB-50 for cellular material – expanded polypropylene bead for 2015

William A. Pate

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