



Production Part Approval - Material Test Results

SUPPLIER **Dow Automotive Systems**

NAME OF LABORATORY **Dow Automotive (Midland Michigan)**

Material Name: **BioFoam SPECFLEX RENUE LE / SPECFLEX NE 187**

Test results for Ford WSS-M15P20-B2 / Rev 1 / January 2009 Polymeric Foam For Seating Applications With Bio-Based Or Recycled Content

All ASTM D 2406 and D 1564 methods are superseded by ASTM D 3574

Note: All Test Results based on minimum of 9 Foam Samples

TYPE OF TEST	TEST PROCEDURE		SUPPLIER TEST RESULTS	
			Dow Bio-Foam	Ford Specification WSS-M15P20-B1/B2
3.3.1	Core Density (ASTM D 3574 A) 50mmX50mmX25mm specimen	kg/m3	48.2	As specified on engineering drawing
3.3.2	Indentation Force Deflection ASTM D 3574, Test B1, 50% deflection	N	646.9	Test values as specified on engineering drawing
3.3.3	Hysteresis Loss, ASTM D3574 Test X6 Procedure "A" for parts. Procedure "B" for cut specimens	% Loss	44.9	Test values as specified on engineering drawing
3.3.4	Tensile Strength ASTM D 3574, Test E			
3.3.4.1	Tensile Strength (kPa)	kPa	178.8	Report
	Elongation (%)	%	80.7	Report
3.3.4.2	Heat aged Tensile Strength ASTM D3574, Test K, tensile value, and % change	% Change, (kPa)	78 (140.0)	75% of unaged value must be retained
	Heat aged Elongation, % elongation value, and % change	% Change, (%)	97 (78.2)	75% of unaged value must be retained
3.3.5	Tear Resistance ASTM D624, Die "C", 10mm sample thickness, min			
	Head restraints & non-cushion soft trim	N/m	552.7	Report
	Cushions	N/m	n/a	450 N/m
	Backs	N/m	n/a	450 N/m
3.3.6	Wet Compression set, % Loss, max ASTM D3574, Test D, ct calculation 50% compression			
	Head restraints & non-cushion soft trim (% loss)	% Loss	13.9	Report
	Cushions	% Loss	n/a	15%
	Backs	% Loss	n/a	25%
3.3.7	Fogging (SAE J1756, 3h at 100C, cooling plates 21C) Fog Number, min	Fog Number	96	70
3.3.8	Odor (FLTM BO 131-01 / SAE J1351) Rating 3 max	Rating Number	1.5	Rating 3
3.3.9	Wet Aged CFD Loss (ASTM D 3574, Test C, L) max			
	Head restraints & non-cushion soft trim	% Change	7.1	Report
	Cushions	% Change	n/a	10%
	Backs	% Change	n/a	10%
3.3.10	Fatigue Resistance, Constant Force Pounding ASTM D 3574, Test I 3	%	n/a	For Seat Cusions Only
3.3.11	Compression Force Deflection Curve ASTM D3574, Test B1, 0%-75%, min 200 data points	-	See attached	Report
3.3.12	Flammability, Burn Rate max., 100mm/min.	mm / minute	Pass See Flammability Certification Document	100 mm/min
3.4	Bio-Based Or Recycled Content (%wt), min	%	5.2	5%
3.5	Material Chemistry Definition	-	MDI	Report

SIGNATURE

K. Kiszka

DATE

23-Feb-12

