Vamac® G

Ethylene Acrylic Elastomer

DuPont Performance Elastomers

Message:

DuPont™ Vamac® G is a terpolymer of ethylene, methylacrylate, and a cure site monomer. It is cured using an amine-based vulcanization system. This gum elastomer includes a small amount of processing aid, and has a nominal specific gravity of 1.03. It has a mild acrylic odor. Use adequate ventilation during storage, mixing, and processing to prevent accumulation of residual vapors. Storage stability is excellent.
Vamac® G has excellent high-temperature durability and oil resistance with service lubricants, coupled with good low-temperature flexibility. Compounds of Vamac® G are typically rated at 175°C (347°F) for heat resistance, with oil swell values around 50% in IRM 903 oil. The properties of Vamac® G make it well suited for a wide range of automotive applications, including powertrain seals and gaskets, rocker cover and piston seals, oil coolant hoses, power steering hoses, turbocharger hoses, crankcase ventilating tubes, coverings for fuel and coolant hoses, O-rings, grommets and spark plug boots.
Vamac® G is an excellent vibration damping material that is uniquely insensitive to temperature over a range of -30°C (-22°F) to 160°C (320°F). Compounds of Vamac® G are suitable for use in torsional dampers and isolator pads.
Vamac® G is a halogen-free polymer and does not decompose to give off corrosive gasses when exposed to flame. It is used for flame-retarded, low-smoke, nonhalogen wire and cable jackets and in nonhalogen, low-smoke flooring.
Vamac® G is well suited for injection, transfer and compression molding, and is easily extruded.

General Information	
Additive	Processing Aid
Features	Durable
	Flame Retardant
	Halogen Free
	High Heat Resistance
	Low Smoke Emission
	Low Temperature Flexibility
	Low Toxicity
	Oil Resistant
	Tack Free
	Vibration Damping
Uses	Automotive Applications
	Automotive Under the Hood
	Flooring
	Gaskets
	Grommets
	Hose
	Seals
	Tubing
	Wire & Cable Applications
Appearance	Clear/Transparent
Forms	Bale
Processing Method	Compression Molding
	Extrusion

Injection Molding

Resin Transfer Molding

Physical	Nominal Value	Unit	Test Method
Mooney Viscosity			ASTM D1646
ML 1+4, 100°C	17 to 40	MU	
MS 1, 121°C	> 16	MU	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A [1]	48		
Shore A [2]	58		
Shore A [3]	57		
Shore A	68		
Shore A [4]	77		
Shore A [5]	66		
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			
100% Strain [6]	4.80	MPa	ASTM D412
100% Strain [7]	4.70	MPa	ASTM D412
100% Strain [8]	5.20	MPa	ASTM D412
100% Strain	5.10	MPa	ASTM D412
100% Strain [9]	6.40	MPa	ASTM D412
Tensile Strength			ASTM D412
Yield [10]	8.80	MPa	
Yield [11]	11.3	MPa	
Yield [12]	13.8	MPa	
Yield	16.6	MPa	
Yield [13]	15.3	MPa	
Yield [14]	14.1	MPa	
Tensile Elongation			ASTM D412
Break [15]	190	%	
Break [16]	150	%	
Break [17]	220	%	
Break	280	%	
Break [18]	230	%	
Break [19]	300	%	
Compression Set			ASTM D395
150°C, 70 hr	16	%	
150°C, 168 hr	21	%	
150°C, 336 hr	26	%	
150°C, 504 hr	30	%	
150°C, 1008 hr	40	%	

177°C, 168 hr	24	%	
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Volume			ASTM D471
150°C, 70 hr, in ASTM Oil #1	9.0	%	
150°C, 70 hr, in IRM 903 Oil	60	%	
150°C, 1008 hr, in Dexron® III ATF	28	%	
150°C, 1008 hr, in SF105 Oil	32	%	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature			ASTM D3418
-- [20]	-32.6	°C	
-- [21]	-27.9	°C	
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Mooney Scorch - Time to 10-unit rise (121°C)	13.0	min	ASTM D1646
Volatiles	< 0.4	wt%	Internal Method

NOTE	
1.	Aged 70 Hrs at 150°C (302°F) Immersed in IRM 903
2.	Aged 1008 Hrs at 150°C (302°F) Immersed in SF-105 Oil
3.	Aged 1008 Hrs at 150°C (302°F) Immersed in GM Dexron® III ATF
4.	Aged 1008 Hrs at 150°C (302°F) in Air
5.	Aged 70 Hrs at 150°C (302°F) Immersed in ASTM #1 Oil
6.	Aged 70 Hrs at 150°C (302°F) Immersed in IRM 903
7.	Aged 1008 Hrs at 150°C (302°F) Immersed in SF-105 Oil
8.	Aged 1008 Hrs at 150°C (302°F) Immersed in GM Dexron® III ATF
9.	Aged 1008 Hrs at 150°C (302°F) in Air
10.	Aged 70 Hrs at 150°C (302°F) Immersed in IRM 903
11.	Aged 1008 Hrs at 150°C (302°F) Immersed in SF-105 Oil
12.	Aged 1008 Hrs at 150°C (302°F) Immersed in GM Dexron® III ATF
13.	Aged 1008 Hrs at 150°C (302°F) in Air
14.	Aged 70 Hrs at 150°C (302°F) Immersed in ASTM #1 Oil
15.	Aged 70 Hrs at 150°C (302°F) Immersed in IRM 903
16.	Aged 1008 Hrs at 150°C (302°F) Immersed in SF-105 Oil

17.	Aged 1008 Hrs at 150°C (302°F) Immersed in GM Dexron® III ATF
18.	Aged 1008 Hrs at 150°C (302°F) in Air
19.	Aged 70 Hrs at 150°C (302°F) Immersed in ASTM #1 Oil
20.	Initial
21.	Inflection

Recommended distributors for this material

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