



# Geon™ Vinyl Rigid Extrusion 87416

## Rigid Polyvinyl Chloride

### Key Characteristics

General	
Material Status	• Commercial: Active
Regional Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Features	• Good Weather Resistance • High Impact Resistance
Uses	• Automotive Applications • Profiles • Outdoor Applications • Windows & Doors
Agency Ratings	• AAMA 303
Automotive Specifications	• CHRYSLER MS-DC-28 Type B CPN3012 Color: Black • GM GM7001M (PVC)
Appearance	• Colors Available
Forms	• Pellets
Processing Method	• Extrusion

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.45	1.45	ASTM D792
PVC Cell Classification	1-31432-33	1-31432-33	ASTM D4216
PVC Cell Classification	13344	13344	ASTM D1784
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus <sup>2</sup>	360000 psi	2480 MPa	ASTM D638
Tensile Strength <sup>2</sup> (Yield)	6400 psi	44.1 MPa	ASTM D638
Flexural Modulus	430000 psi	2960 MPa	ASTM D790
Flexural Strength	12300 psi	84.8 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
Across Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded	3.0 ft·lb/in	160 J/m	
Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded	2.9 ft·lb/in	150 J/m	
Drop Impact Resistance			ASTM D4226
73°F (23°C) <sup>3</sup>	1.20 in·lb/mil	53.4 J/cm	
73°F (23°C) <sup>4</sup>	4.00 in·lb/mil	178 J/cm	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D, 15 sec)	82	82	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	163 °F	72.8 °C	
CLTE - Flow	3.4E-5 in/in/°F	6.1E-5 cm/cm/°C	ASTM D696
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.0295 in (0.749 mm), ALL)	V-0	V-0	UL 94
CSA Flammability <sup>5</sup> (38.6 mil (980.4 µm))	V-0	V-0	

Copyright © 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.

Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
AAMA 303	Pass	Pass	ASTM D4726
Ease of Sizing	Acceptable	Acceptable	
Note: The Cell Classification was determined using the notched Izod test with injection molded samples.			

**Processing Information**

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	360 to 380 °F	182 to 193 °C

**Notes**

- <sup>1</sup> Typical values are not to be construed as specifications.
- <sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)
- <sup>3</sup> Procedure A, C.125 Dart
- <sup>4</sup> Procedure B, C.125 Dart
- <sup>5</sup> All Colors

**CONTACT INFORMATION**

<b>Americas</b>	<b>Asia</b>	<b>Europe</b>
United States - Avon Lake +1 440 930 1000	China - Guangzhou +86 20 8732 7260	Germany - Gaggenau +49 7225 6802 0
United States - McHenry +1 815 385 8500	China - Shenzhen +86 755 2969 2888	Spain - Barbastró (Huesca) +34 974 310 314
	China - Suzhou +86 512 6823 24 38	
	China - Suzhou +86 512 6265 2600	
	Hong Kong - +852 2690 5332	
	Taiwan - Yonghe City, +886 9396 99740, +886 2929 1849	



*Beyond Polymers.*

*Better Business Solutions.™*

www.polyone.com

<b>PolyOne Americas</b>	<b>PolyOne Asia</b>	<b>PolyOne Europe</b>
33587 Walker Road Avon Lake, Ohio 44012 United States +1 440 930 1000 +1 866 POLYONE	No. 88 Guoshoujing Road Z.J Hi-tech Park, Pudong Shanghai, 201203, China +86 21 5080 1188	6 Giällewee +352 269 050 35

Copyright ©, 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.