



# OnFlex™-V 1050D-S0041

## Thermoplastic Vulcanizate

### Key Characteristics

#### Product Description

OnFlex™-V provides the performance of traditional vulcanised rubber, but with the processability of a thermoplastic. OnFlex™-V 1000 series thermoplastic elastomer compounds are based on a polyolefin phase with a cross-linked EPDM phase dispersed within it. This range of compounds are specially formulated for injection moulding processes. In addition to this, OnFlex™-V 1000 series thermoplastic elastomer compounds provide excellent colourability (low yellowness), good mechanical properties, excellent flexibility over a wide temperature range, a wide hardness range, and good hydrocarbon, heat ageing and weather resistance.

#### General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Features	• General Purpose		
Uses	• Automotive Applications • Construction Applications	• Consumer Applications • General Purpose	• Industrial Applications
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

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

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.920 g/cm <sup>3</sup>	0.920 g/cm <sup>3</sup>	ISO 1183
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (100% Strain)	1640 psi	11.3 MPa	ISO 37
Tensile Stress (300% Strain)	1750 psi	12.1 MPa	ISO 37
Tensile Stress (Break)	3130 psi	21.6 MPa	ISO 37
Tensile Elongation (Break)	560 %	560 %	ISO 37
Tear Strength	550 lbf/in	96 kN/m	ISO 34-1
Compression Set			ISO 815
73°F (23°C), 72.0 hr	45 %	45 %	
158°F (70°C), 22.0 hr	65 %	65 %	
212°F (100°C), 22.0 hr	85 %	85 %	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore D)	50	50	ISO 868

#### Additional Properties

Properties are measured using injection molded plaques.

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80.0 °C
Drying Time	3.0 hr	3.0 hr
Processing (Melt) Temp	356 to 410 °F	180 to 210 °C
Mold Temperature	86.0 to 140 °F	30.0 to 60.0 °C
Injection Rate	Fast	Fast

#### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

Copyright © 2008 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.

**CONTACT INFORMATION**

**Americas**

Argentina - Buenos Aires  
+0054 11 4200 5917  
  
 Brasil - Campinas  
+55 19 3206 0561  
  
 Mexico - Toluca  
+52 722 2790200  
  
 United States - Avon Lake  
+1 440 930 1000  
  
 United States - McHenry  
+1 (815) 385-8500

**Asia**

China - Shenzhen  
+86 (0) 755 2969 2888  
  
 China - Suzhou  
+86 (0) 512 6823 24 38  
  
 China - Suzhou  
+86 512 6265 2600  
  
 Hong Kong -  
+852 2690 5332  
  
 India - Mumbai  
+91 9820 194 220  
  
 Taiwan - Yonghe City,  
+886 9396 99740

**Europe**

Germany - Gaggenau  
+49 (0) 7225 6802 0  
  
 Netherlands - The Netherlands  
+31 (0) 165 331 293  
  
 Spain - Barbastro (Huesca)  
+34 (0) 9 7431 0314  
  
 Turkey - Cekmece-Istanbul-Türkiye  
+90 (0) 212 549 2256



*Beyond Polymers.*

*Better Business Solutions. SM*

[www.polyone.com](http://www.polyone.com)

**PolyOne Americas**

33587 Walker Road  
Avon Lake, Ohio 44012  
United States  
+1 440 930 1000  
+1 866 POLYONE

**PolyOne Asia**

No. 88 Guoshoujing Road  
Z.J Hi-tech Park, Pudong  
Shanghai, 201203, China  
+86 (0) 21 5080 1188

**PolyOne Europe**

2 Rue Melville Wilson  
5330 Assesse, Belgium  
+32 (0) 83 660 211

Copyright ©, 2008 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.