

# INFUSE™ 9100

## The Dow Chemical Company - Olefin Block Copolymer

Monday, November 4, 2019

### **General Information**

#### **Product Description**

INFUSE™ 9100 Olefin Block Copolymer is a high performance olefin block copolymer that can be widely used in thermoplastic elastomer applications where higher service temperature requirements are needed. INFUSE 9100 exhibits very good processability in various extrusion processes. INFUSE 9100 also provides high filler loading capability along with low compression set over a wide temperature range.

#### Main Characteristics

- High upper service temperature performance
- · Highly flexible with good elastic recovery
- · Fast set up times for processability
- · General purpose elastomer
- · Excellent for compounds and blends

### Complies with

- EU, No 10/2011
- U.S. FDA FCN 424 Consult the regulations for complete details.

General			
Material Status	Commercial: Active		
Availability	<ul><li>Asia Pacific</li><li>Europe</li></ul>	<ul><li>Latin America</li><li>North America</li></ul>	
Additive	Antiblock: No	<ul> <li>Processing Aid: No</li> </ul>	Slip: No
Agency Ratings	• EU No 10/2011	• FDA FCN 424	
Forms	Pellets		

Density / Specific Gravity         0.879         ASTM D792           Melt Mass-Flow Rate (190°C/2.16 kg)         1.0 g/10 min         ASTM D1238           Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus - 100% Secant (Compression Molded)         404 psi         ASTM D638           Tensile Strength (Break, Compression Molded)         957 psi         ASTM D638           Tensile Elongation (Break, Compression Molded)         480 %         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770 psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890 psi         ASTM D412           Tensile Elongation (Break)         1300 %         ASTM D412           Tear Strength         228 lbf/in         ASTM D412           Compression Set         ASTM D624         ASTM D395           70°F         19 %         ASTM D395           158°F         47 %         ASTM D412           Durometer Hardness (Shore A, Compression Molded)         75 ASTM D2240	ASTM & ISO Properties 1					
Melt Mass-Flow Rate (190°C/2.16 kg)         1.0 g/10 min         ASTM D1238           Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus - 100% Secant (Compression Molded)         404 psi         ASTM D638           Tensile Strength (Break, Compression Molded)         957 psi         ASTM D638           Tensile Elongation (Break, Compression Molded)         480 %         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770 psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890 psi         ASTM D412           Tensile Elongation (Break)         1300 %         ASTM D412           Tear Strength         228 lb/lin         ASTM D624           Compression Set         47         %           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method	Physical	Nominal Value	Unit	Test Method		
Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus - 100% Secant (Compression Molded)         404         psi         ASTM D638           Tensile Strength (Break, Compression Molded)         957         psi         ASTM D638           Tensile Elongation (Break, Compression Molded)         2770         psi         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770         psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890         psi         ASTM D412           Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         Ibf/in         ASTM D624           Compression Set         45         45         ASTM D395           70°F         19         %         ASTM D395           158°F         47         %         ASTM D2240           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Density / Specific Gravity	0.879		ASTM D792		
Tensile Modulus - 100% Secant (Compression Molded)         404         psi         ASTM D638           Tensile Strength (Break, Compression Molded)         957         psi         ASTM D638           Tensile Elongation (Break, Compression Molded)         480         %         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770         psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890         psi         ASTM D412           Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         Ibf/in         ASTM D624           Compression Set         ASTM D395         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method	Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238		
Tensile Strength (Break, Compression Molded)         957 psi         ASTM D638           Tensile Elongation (Break, Compression Molded)         480 %         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770 psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890 psi         ASTM D412           Tensile Elongation (Break)         1300 %         ASTM D412           Tear Strength         228 lbf/in         ASTM D624           Compression Set         ASTM D95           70°F         19 %         *           158°F         47 %         *           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248 °F         Internal Method	Mechanical	Nominal Value	Unit	Test Method		
Tensile Elongation (Break, Compression Molded)         480         %         ASTM D638           Flexural Modulus - 2% Secant (Compression Molded)         2770         psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890         psi         ASTM D412           Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         lbf/in         ASTM D624           Compression Set         ASTM D395         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Tensile Modulus - 100% Secant (Compression Molded)	404	psi	ASTM D638		
Flexural Modulus - 2% Secant (Compression Molded)         2770 psi         ASTM D790           Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890 psi         ASTM D412           Tensile Elongation (Break)         1300 %         ASTM D412           Tear Strength         228 lbf/in         ASTM D624           Compression Set         ASTM D395         ASTM D395           70°F         19 %         **           158°F         47 %         **           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248 °F         Internal Method	Tensile Strength (Break, Compression Molded)	957	psi	ASTM D638		
Elastomers         Nominal Value         Unit         Test Method           Tensile Strength (Break)         1890         psi         ASTM D412           Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         lbf/in         ASTM D624           Compression Set         ASTM D395         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Tensile Elongation (Break, Compression Molded)	480	%	ASTM D638		
Tensile Strength (Break)         1890         psi         ASTM D412           Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         lbf/in         ASTM D624           Compression Set         ASTM D395         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Flexural Modulus - 2% Secant (Compression Molded)	2770	psi	ASTM D790		
Tensile Elongation (Break)         1300         %         ASTM D412           Tear Strength         228         lbf/in         ASTM D624           Compression Set         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Elastomers	Nominal Value	Unit	Test Method		
Tear Strength         228         lbf/in         ASTM D624           Compression Set         ASTM D395           70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Tensile Strength (Break)	1890	psi	ASTM D412		
Compression Set         ASTM D395           70°F         19 %           158°F         47 %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248 °F         Internal Method	Tensile Elongation (Break)	1300	%	ASTM D412		
70°F         19         %           158°F         47         %           Hardness         Nominal Value         Unit         Test Method           Durometer Hardness (Shore A, Compression Molded)         75         ASTM D2240           Thermal         Nominal Value         Unit         Test Method           Melting Temperature (DSC)         248         °F         Internal Method	Tear Strength	228	lbf/in	ASTM D624		
158°F 47 %  Hardness Nominal Value Unit Test Method  Durometer Hardness (Shore A, Compression Molded) 75 ASTM D2240  Thermal Nominal Value Unit Test Method  Melting Temperature (DSC) 248 °F Internal Method	Compression Set			ASTM D395		
Hardness Nominal Value Unit Test Method  Durometer Hardness (Shore A, Compression Molded) 75 ASTM D2240  Thermal Nominal Value Unit Test Method  Melting Temperature (DSC) 248 °F Internal Method	70°F	19	%			
Durometer Hardness (Shore A, Compression Molded)  75 ASTM D2240  Melting Temperature (DSC)  Nominal Value Unit Test Method  48 °F Internal Method	158°F	47	%			
ThermalNominal ValueUnitTest MethodMelting Temperature (DSC)248 °FInternal Method	Hardness	Nominal Value	Unit	Test Method		
Melting Temperature (DSC)  248 °F Internal Method	Durometer Hardness (Shore A, Compression Molded)	75		ASTM D2240		
	Thermal	Nominal Value	Unit	Test Method		
TMA <sup>2</sup> (39.4 mil) 237 °F Internal Method	Melting Temperature (DSC)	248	°F	Internal Method		
	TMA <sup>2</sup> (39.4 mil)	237	°F	Internal Method		



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#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 1N, 5°C/min

