

# ENGAGE™ 8402

Polyolefin Elastomer

The Dow Chemical Company

## Message:

ENGAGE™ 8402 Polyolefin Elastomer is an ethylene-octene copolymer that offers excellent performance in durable, flexible injection molded industrial and consumer goods.

ENGAGE 8402 provides high clarity in products requiring visual inspection and allows the use of hot runner molds to enhance production efficiency. In addition, its low density can help control resin and production costs, while reducing the weight of end products.

Main Characteristics:

Pellet form

Excellent flow characteristics

High clarity

Reduced part weight

Applications:

Injection molded industrial and consumer durable goods

Impact modification

Complies with:

EU, No 10/2011

U.S. FDA 177.1520(c)3.2c

U.S. FDA DMF

Consult the regulations for complete details.

General Information			
Agency Ratings		DMF Unspecified Rating	
		EU No 10/2011	
		FDA 21 CFR 177.1520(c) 3.2c	
Forms		Pellets	
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.902	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	30	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	2	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	88		
Shore D, 1 sec, Compression Molded	34		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	6.70	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	11.3	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	910	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	72.6	MPa	
2% Secant : Compression Molded	72.0	MPa	

Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	79.1	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-36.0	°C	Internal Method
Vicat Softening Temperature	72.2	°C	ASTM D1525
Melting Temperature (DSC) <sup>5</sup>	96.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	80.4	°C	Internal Method

#### NOTE

1. 510 mm/min
2. 510 mm/min
3. 510 mm/min
4. Die C
5. 10°C/min

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