

# Diamond AES 177

Acrylonitrile Ethylene Styrene

Network Polymers, Inc.

## Message:

Diamond AES 177 is an Acrylonitrile Ethylene Styrene (AES) product. It can be processed by injection molding and is available in North America.

Characteristics include:

REACH Compliant

RoHS Compliant

WEEE Compliant

Good Stiffness

Good Weather Resistance

General Information			
Features	Good Stiffness		
	Good Weather Resistance		
	High Impact Resistance		
Agency Ratings	EC 1907/2006 (REACH)		
	EU 2002/96/EC (WEEE)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.03	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) <sup>1</sup> (220°C/10.0 kg)	17	g/10 min	ASTM D1238
Molding Shrinkage - Flow (23°C, 3.18 mm, Injection Molded)	0.60 to 0.80	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield, 23°C, 3.18 mm, Injection Molded)	39.0	MPa	ASTM D638
Flexural Modulus - Tangent <sup>3</sup> (23°C, 3.18 mm, Injection Molded)	2310	MPa	ASTM D790
Flexural Strength <sup>4</sup> (23°C, 3.18 mm, Injection Molded)	60.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm, Injection Molded)	400	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.18 mm, Injection Molded	77.2	°C	
1.8 MPa, Unannealed, 6.35 mm, Injection Molded	84.4	°C	

Injection	Nominal Value	Unit
Drying Temperature	80.0 to 85.0	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%
Suggested Shot Size	40 to 70	%
Suggested Max Regrind	25	%
Rear Temperature	230 to 260	°C
Middle Temperature	232 to 265	°C
Front Temperature	235 to 272	°C
Nozzle Temperature	220 to 272	°C
Processing (Melt) Temp	220 to 272	°C
Mold Temperature	40.0 to 80.0	°C
Injection Rate	Fast	
Back Pressure	0.517 to 1.03	MPa

#### NOTE

1. Procedure A
2. Type I, 51 mm/min
3. 1.3 mm/min
4. 1.3 mm/min

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#### Recommended distributors for this material

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WECHAT