reSound™ BIO RS7900-0001 45N

Thermoplastic Elastomer

Key Characteristics

Product Description			
reSound™ BIO RS7900-0001 45N is a bio-based thermoplastic elastomer with 35% bio-based content. This material is targeted for consumer applications. reSound™ BIO RS7900--0001 45N can also be overmolded onto PP.			
General			
Material Status	• Commercial: Active		
Regional Availability	• North America		
Features	• Specialty Grade		
Uses	• Consumer Applications	• Overmolding	• Soft Touch Applications
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.11	1.11	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	288 psi	1.99 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	759 psi	5.23 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	690 %	690 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	48	48	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	7.40 Pa·s	7.40 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	120 to 140 °F	49 to 60 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.020 to 0.030 %	0.020 to 0.030 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 410 °F	182 to 210 °C
Front Temperature	370 to 420 °F	188 to 216 °C
Nozzle Temperature	380 to 421 °F	193 to 216 °C
Processing (Melt) Temp	380 to 425 °F	193 to 218 °C
Mold Temperature	55 to 85 °F	13 to 29 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa
Screw Speed	50 to 100 rpm	50 to 100 rpm

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Injection Notes

Typical colorant letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect on adhesion. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Concentrates based on PVC should not be used. The final determination of color concentrate suitability should be determined by customer trials. Contact GLS for more information on appropriate color concentrate base resins.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

reSound™ BIO RS7900-0001 45N should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°F

Hot Runners: 380°F-440°F
Hot Tip: 380°F-450°F

Injection Speed: 0.5 to 2 in/sec
1st Stage - Boost Pressure: 500 to 1,000 psi
2nd Stage - Hold Pressure: 20-60% of Boost
Hold Time (Thick Part): 2 to 4 sec
Hold Time (Thin Part): 1 to 2 sec

Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr

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