

Bionate® 80A

Polycarbonate + TPU

DSM Biomedical Inc.

Message:

Bionate® 80A is a Polycarbonate + TPU (PC+TPU) product. It can be processed by extrusion or injection molding and is available in North America. Applications of Bionate® 80A include medical/healthcare and food contact applications. Characteristics include:

- Biocompatible
- Good Aesthetics
- Good Flexibility
- High ESCR (Stress Crack Resistant)
- Wear Resistant

General Information			
Features	Biocompatible		
	Good Abrasion Resistance		
	Good Flexibility		
	Good Strength		
	High ESCR (Stress Crack Resist.)		
	Opticals		
	Oxidation Resistant		
Uses	Medical/Healthcare Applications		
Agency Ratings	DMF Unspecified Rating		
	FDA Unspecified Rating		
Appearance	Clear Amber		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (224°C/1.2 kg)	22	g/10 min	ASTM D1238
Molding Shrinkage - Flow			ASTM D955
-- ¹	1.2	%	
-- ²	0.0 to 3.0	%	
Water Absorption (Saturation)	1.2	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	83		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638

Ultimate	46.6	MPa	
50% Strain	4.37	MPa	
100% Strain	6.01	MPa	
300% Strain	16.9	MPa	
Tensile Elongation (Break)	530	%	ASTM D638
Flexural Modulus - 1% Secant	28.7	MPa	ASTM D790
Flexural Strength (5.0% Strain)	1.24	MPa	ASTM D790
Coefficient of Friction (vs. Itself - Dynamic)	1.5		ASTM D1894
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	5.70	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ³	64.8	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	78.3	°C	ASTM D1525
CLTE - Flow	1.6E-4	cm/cm/°C	ASTM E831
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant (60 Hz)	5.00		ASTM D150
Extrusion	Nominal Value	Unit	
Melt Temperature	177 to 210	°C	
NOTE			
1.	4.0 in disk		
2.	Flame bar		
3.	Die C		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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