

# Bionate® 75D

Polycarbonate + TPU

DSM Biomedical Inc.

## Message:

Bionate® 75D 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® 75D 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	1.22	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (224°C/1.2 kg)	14	g/10 min	ASTM D1238
Molding Shrinkage - Flow			ASTM D955
-- <sup>1</sup>	1.2	%	
-- <sup>2</sup>	0.50 to 2.0	%	
Water Absorption (Saturation)	0.80	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	73		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638

Ultimate	63.2	MPa	
50% Strain	35.8	MPa	
100% Strain	40.2	MPa	
Tensile Elongation (Break)	240	%	ASTM D638
Flexural Modulus - 1% Secant	1790	MPa	ASTM D790
Flexural Strength (5.0% Strain)	70.3	MPa	ASTM D790
Coefficient of Friction (vs. Itself - Dynamic)	0.64		ASTM D1894
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	31.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>3</sup>	236	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	56.0	°C	ASTM D1525
CLTE - Flow	9.3E-5	cm/cm/°C	ASTM E831
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	> 25	kV/mm	ASTM D149
Dielectric Constant (60 Hz)	3.70		ASTM D150
Extrusion	Nominal Value	Unit	
Melt Temperature	188 to 232	°C	
NOTE			
1.	4.0 in disk		
2.	Flame bar		
3.	Die C		

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#### Recommended distributors for this material

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