

CarboSil™ 20 90A

Thermoplastic Polyurethane Elastomer (PC Based)

DSM Biomedical Inc.

Message:

CarboSil™ 20 90A is a Thermoplastic Polyurethane Elastomer (PC Based) (TPU-PC) product. It can be processed by coating, compression molding, dip coating, extrusion, injection molding, or spraying and is available in North America. Applications of CarboSil™ 20 90A include medical/healthcare and food contact applications.

Characteristics include:

- Biocompatible
- Good Processability
- Good Toughness

General Information			
Features	Biocompatible		
	Good Processability		
	Good Strength		
	Good Toughness		
	Oxidation Resistant		
Uses	Medical/Healthcare Applications		
Agency Ratings	DMF Unspecified Rating		
	FDA Unspecified Rating		
Appearance	Clear Amber		
	Translucent		
Forms	Pellets		
Processing Method	Coating		
	Compression Molding		
	Dip Coating		
	Extrusion		
	Injection Molding		
Physical	Spraying		
	Nominal Value	Unit	Test Method
	Specific Gravity	1.16	g/cm ³ ASTM D792
	Melt Mass-Flow Rate (MFR) (224°C/1.2 kg)	27	g/10 min ASTM D1238
	Nominal Value	Unit	Test Method
Hardness	Durometer Hardness (Shore A)		
	90		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
	Tensile Strength (Ultimate)	40.0	MPa ASTM D1708
	Tensile Stress		ASTM D1708

50% Strain	7.46	MPa	
100% Strain	9.83	MPa	
300% Strain	26.1	MPa	
Tensile Elongation (Break)	420	%	ASTM D1708
Flexural Modulus - 1% Secant	40.7	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	57.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ¹	87.6	kN/m	ASTM D624
Compression Set (25°C, 22 hr)	15	%	ASTM D395
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-4.00	°C	ASTM D3418
Extrusion	Nominal Value	Unit	
Melt Temperature	188 to 210	°C	
NOTE			

1. Die C

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