

# BJB Polyurethane TC-851 A/B

Polyurethane  
BJB Enterprises, Inc.

Message:

TC-851 A/B produces a high impact rigid 78 Shore D material that is commonly used to make computer housings, models of all kinds, artwork, and can also be used for electronic component encapsulation. It provides a working time of 8 minutes.

Product Highlights:

- Non-Mercury Based Catalyst System
- RoHS compliant
- High impact rigid material
- Odorless, clean white color
- One to two hour demold time
- Excellent for vacuum or pressure casting
- Low viscosity

General Information			
Features	Low viscosity		
	Rigidity, high		
	Impact resistance, high		
	The smell is low to none		
Uses	Electrical/Electronic Applications		
	Shell		
RoHS Compliance	RoHS compliance		
Appearance	White		
	Opacity		
Forms	Liquid		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
-- <sup>1</sup>	1.07	g/cm <sup>3</sup>	ASTM D792
-- <sup>2</sup>	1.11	g/cm <sup>3</sup>	
--	1.13	g/cm <sup>3</sup>	
Molding Shrinkage - Flow <sup>3</sup>	0.50	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	76 - 80		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1450	MPa	ASTM D638
Tensile Strength	49.6	MPa	ASTM D638
Tensile Elongation (Break)	8.0	%	ASTM D638
Flexural Modulus	1790	MPa	ASTM D790

Flexural Strength	71.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	35	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	96.1 - 102	°C	ASTM D648
1.8 MPa, not annealed	87.8 - 93.3	°C	ASTM D648
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Component a	Mixing ratio by weight: 100, mixing ratio by capacity: 100		
Component B	Mixing ratio by weight: 50, mixing ratio by capacity: 52		
Shelf Life	26	wk	
Thermoset Mix Viscosity			Brookfield
25°C <sup>4</sup>	1400	cP	Brookfield
25°C <sup>5</sup>	75.0	cP	Brookfield
25°C <sup>6</sup>	400	cP	Brookfield
Demold Time (25°C)	60 - 120	min	
Work Time <sup>7</sup> (25°C)	6.0 - 8.0	min	
Cure Time (25°C)	5.0 - 7.0	day	
Additional Information	Nominal Value	Unit	Test Method

Note: Reported physical properties are based on test specimens cured at an elevated temperature, 180°F (82°C). In order to achieve maximum physical properties, a post cure with heat is required. BJB recommends 24 hours at ambient temperature, 77°F (25°C), followed by 16 hours at 150-180°F (66-82°C). Support of the part may be required to prevent part deformation during the heat curing process.

NOTE	
1.	Part B
2.	Part A
3.	12" x 1/2" x 1/2"
4.	Part B
5.	Part A
6.	Mixed
7.	100g mass

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