BJB Polyurethane TC-857 A/B

Polyurethane

BJB Enterprises, Inc.

Message:

TC-857 A/B is a rigid 84 Shore D polyurethane system that exhibits exceptional physical properties. It is a high performance material that features high heat deflection capability and low shrinkage. TC-857 is a clear casting material that allows for unrestricted tinting and precise color matching. This product is ideal for producing intrinsically colored parts requiring a non-painted finish. This system can be easily processed by hand or with meter-mix-dispense, pressure or vacuum cast equipment.
Product Highlights:
Exhibits high heat distortion temperature
Excellent impact resistance
Odorless, clear; easy to tint or color
Excellent for hand, vacuum or pressure casting
Exceptional clarity

General Information	
Features	Impact resistance, high Good coloring Heat resistance, high The smell is low to none Definition, high Low shrinkage
Appearance	Yellow Clear/transparent
Forms	Liquid
Processing Method	Casting

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
Part A	1.08		
Part B	1.06		
Color			
Part A	Colorless		
Part B	Pale Yellow		
Gel Time	5.5 - 7.5	min	
Work Time (25°C) [1]	5.0 - 7.0	min	
Brokfield Viscosity			
Mixed	1.20	Pa·s	
Part A : 25°C	0.600	Pa·s	
Part B : 25°C	2.80	Pa·s	
Part B : 32°C	0.750	Pa·s	
Cure Time (25°C)	5.0 - 7.0	day	

Density	1.12	g/cm³	ASTM D792
Molding Shrinkage - Flow [2] (12.7 mm)	0.40	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	82 - 86		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2000	MPa	ASTM D638
Tensile Strength	62.7	MPa	ASTM D638
Tensile Elongation (Break)	11	%	ASTM D638
Flexural Modulus	2070	MPa	ASTM D790
Flexural Strength	84.1	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	50	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	98.9 - 104	°C	ASTM D648
1.8 MPa, not annealed	96.1 - 102	°C	ASTM D648
Thermoset	**Nominal Value**	**Unit**	
Thermoset Components			
Component a	Mixing ratio by weight: 100, mixing ratio by capacity: 100		
Component B	Mixing ratio by weight: 55, mixing ratio by capacity: 56		
Shelf Life	26	wk	
Demold Time (25°C)	180 - 240	min	
Additional Information	**Nominal Value**	**Unit**	

Note: Reported physical properties based on elevated temperature cured test specimens.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 heat cure.

NOTE	
1.	100g mass
2.	12x0.5x0.5 in

Recommended distributors for this material

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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