TC-820 A/B

RIGID 84 SHORE D POLYURETHANE CASTING SYSTEM

PRODUCT HIGHLIGHTS:

- Convenient 1:1 by volume ratio
- Non-Mercury Catalyst System
- High impact rigid material
- Translucent-Easy to color
- Fast demolds
- Excellent for vacuum, pressure or hand casting
- Exhibits high heat distortion temperature

PRODUCT DESCRIPTION:

TC-820 A/B produces a high impact rigid 84 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.

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240	84 ± 2
Specific Gravity, (g/cc) cured ASTM D-792	1.17
Cubic Inches Per Pound	24.6
Color/Appearance	Translucent colorless
Tensile Strength, (psi) ASTM D-638	8,700
Tensile Modulus, (psi) ASTM D-638	2.8×10^5
Elongation, (%) ASTM D-638	10
Flexural Strength, (psi) ASTM D-790	12,600
Flexural Modulus, (psi) ASTM D-790	3.2×10^5
Shrinkage, (in./in.) linear ASTM D-2566	0.002
Izod Impact, (ft.-lb./in.) notched ASTM D-256	0.8
Heat Deflection Temperature ASTM D-648:	
@ 66 psi	200°F ± 5°F (93° ± 3°C)
@ 264 psi	175°F ± 5°F (79° ± 3°C)

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

HANDLING PROPERTIES:

Mix Ratio (by weight):	
Part A	100 parts by weight
Part B	90 parts by weight
Mix Ratio (by volume):	
Part A	100 parts by volume
Part B	100 parts by volume
Specific Gravity, (g/cc):	
Part A	1.19
Part B	1.06

HANDLING PROPERTIES (continued):

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Viscosity, (cps) @ 77°F (25°C) Brookfield:

Part A	60
Part B	1,650
Mixed	450

Color:

Part A	Translucent yellow
Part B	Translucent colorless
Work Time, (100-gram mass) @ 77°F (25°C)	2 minutes
Demold Time @ 77°F (25°C)	30-60 minutes
Cure Schedule	For maximum physical properties the material should be post cured (see "HEAT CURING").

NOTE: Prior to use thoroughly re-blend the "B" component.

VACUUM DE-GASSING/ DE-AIRING:
It is advisable whenever possible to evacuate entrapped air prior to casting this system. The use of de-airing agent, (BJB's AF-4), can speed the process.

HEAT CURING:
Enhanced physical properties can be achieved by post-curing TC-820 parts for a period of 2 - 4 hours at a minimum of 150°F (66°C) and to a maximum of 180°F (82°C). To achieve the heat distortion temperatures shown, an overnight cure at 180°F (82°C) was used prior to testing.

NOTE:
TC-820 A/B with its non-mercury catalyst system does exhibit greater sensitivity to moisture than do similar products that use mercury-containing catalysts. TC-820 A/B should be stored at ambient temperature and the TC-820 "B" component may require vacuum de-airing prior to combining it with the "A" component. Evacuation of the mixing components is mandatory in order to achieve best results. If further information is required, please contact BJB's technical staff for assistance.

STORAGE:
Store at ambient temperature in a dry place. Unopened containers will have a shelf life of 6 months, from date of shipment, when properly stored at room temperatures. **Purge opened containers with dry nitrogen before re-sealing.**

PACKAGING:

Gallon Kits	8 lbs. A, 7.2 lbs. B
5 Gallon Kits	40 lbs. A, 36 lbs. B
55 Gallon Drum Kits	400 lbs. A, 360 lbs. B

SAFETY PRECAUTIONS:
Use in a well-ventilated area. Avoid contact with skin using protective gloves and protective clothing. Repeated or prolonged contact on the skin may cause an allergic reaction.

Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product.

IF CONTACT OCCURS:

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. It is *not* recommended to remove resin from skin with solvents. Solvents only increase contact and dry skin. Seek qualified medical attention if allergic reactions occur.

Eyes: Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion: If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

Refer to the Material Safety Data Sheet before using this product.

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