

TC-872 A/B

RIGID 70 SHORE D HIGH HEAT RESISTANT POLYURETHANE CASTING SYSTEM



TC-872 A/B is a RoHS compliant, non-mercury based catalyst polyurethane system that produces a tough 70 shore D material. This system has an exceptionally high impact and a high heat deflection temperature which in some cases can be post cured without having to use fixtures.

- High heat resistance
- Non-mercury
- Working time of 10-12 minutes
- High Impact
- RoHS/REACH compliant

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Hardness, Shore D	ASTM D2240-04e1	70 ± 2
Density (g/cc)	ASTM D792-00	1.13
Cubic Inches per Pound	N/A	25.5
Color/Appearance	Visual	Translucent Pale Yellow
Tensile Strength (psi)	ASTM D638-03	3,310
Tensile Modulus (psi)	ASTM D638-03	71,350
Elongation (%)	ASTM D638-03	28.3
Flexural Strength (psi)	ASTM D790-03	3,315
Flexural Modulus (psi)	ASTM D790-03	84,680
Shrinkage (in/in) linear	12"x 1/2" x 1/2"	0.004
Izod Impact, notched (ft-lb/in)	ASTM D256-05	1.78
Heat Deflection Temperature @ 66 psi	ASTM D648-04	240°F (115.6°C)

Note: Reported physicals based on elevated temperature cured test specimens.

HANDLING PROPERTIES	Part A	Part B
Mix Ratio (by weight)	100	35
Mix Ratio (by volume)	100	32
Specific Gravity @ 77°F (25°C)	1.06	1.16
Color	Colorless	Amber
Viscosity (cps) @ 77°F (25°C) Brookfield	830	650
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	750	
Work Time, 100g mass @ 77°F (25°C)	10 – 12 minutes	
Gel Time	13 – 15 minutes	
Demold Time @ 77°F (25°C)	2 – 3 hours	

Properties above are typical and not for specifications.

CURE SCHEDULE/HEAT CURING:

Most of the physical properties can be achieved in 5-7 days at 77°F (25°C). You may use your own post-cure schedule but the physical properties may vary from BJB’s cure schedule of 1-3 hours at 77°F (25°C) followed by 16 hours at 180 °F (82°C). Do not exceed curing temperatures of 200°F (93°C). Support of the part may be required to prevent part deformation during the heat curing process.

NOTE #1:

Important: Shake or re-blend both ‘A’ and ‘B’ components separately prior to weighing and combining. It is advisable whenever possible to evacuate entrapped air prior to casting this system. The use of a de-airing agent can speed up the process. BJB’s AF-4 antifoam works best as the de-airing agent. In conjunction with these support products BJB offers pigments in a wide variety of colors and stainless steel mixers called “Jiffy Mixers”. For additional information on the use of this product, refer to BJB Guidelines for Handling Polyurethane Products. If further information is required, please call BJB’s technical staff for assistance.

NOTE #2:

The natural color of TC-872 A/B is a translucent pale yellow. When the cured material is exposed to direct sunlight or strong UV light, the material will turn to an amber/orange color within approximately 2 hours.

STORAGE:

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING	Part A	Part B	Cubic Inches per Kit
Gallon Kits	8 lbs.	2.8 lbs.	275
5-Gallon Kits	40 lbs.	14 lbs.	1,377
55-Gallon Drum Kits	400 lbs.	140 lbs.	13,770

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.



Handling Guide



TC-872 Part A SDS



TC-872 Part B SDS

NON-WARRANTY "Except for a warranty that materials substantially comply with the data presented in Manufacturer's latest bulletin describing the product (the basis for this substantial compliance is to be determined by the standard quality control tests generally performed by Manufacturer), all materials are sold "AS IS" and without any warranty express or implied as to merchantability, fitness for a particular purpose, patent, trademark or copyright infringement, or as to any other matter. In no event shall Manufacturer's liability for damages exceed Manufacturer's sale price of the particular quantity with respect to which damages are claimed."