

MAKOBOND CASTING RESIN 405

PRODUCT DESCRIPTION

Makobond CR 405 is an unfilled general epoxy system with many possible applications including adhesives, potting, and encapsulating. The CR 405 has a 3-hour pot life which provides good working time for larger applications. CR 405 will not shrink as much as other resins that contain diluent.

PRODUCT HIGHLIGHTS

- LONG POT LIFE
- UNFILLED SYSTEM
- MINIMAL SHRINKAGE
- MULTIPURPOSE

PRODUCT CHARACTERISTICS

	CR 405A	CR 405B
Viscosity @ 25°C	10,000 cps.	1,100 cps.
Specific Gravity	1.15	0.98
Color	Slight Amber	Amber

PHYSICAL PROPERTIES

	Results	ASTM Method
Cured Hardness (Shore D)	84± 5	D2240
Flexural Strength (psi)	17,357 psi	D790
Compressive Strength (psi)	21,167 psi	D695
Tensile Strength (psi)	8,009 psi	D638
Glass Transition Temperature, Tg, (DMA)	335°F	D4065

HANDLING PROPERTIES

Casting Resin 405	
Mix Ratio By Weight, Resin, Hardener	100:20
Mix Ratio By Volume, Resin, Hardener	4.2:1
Mixed Viscosity @ 25°C	7,700 cps.
Pot Life @ 25°C	160-220 minutes

HANDLING AND CURING

Measure out the proper weights of CR 405 and mix until uniform and no streaks are present throughout. Be sure to scrape the sides and bottom on mixing container to avoid any unmixed material. CR 405 will cure at room temperature but does require a post cure to reach full properties. A suggested post cure schedule would be 2 hours at 200°F, 250°F, 300°F, and 350°F each once the system has cured at room temperature.

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PACKAGING WEIGHTS

	Quart Kit	Gallon Kit	Pail Kit	Drum Kit
CR-405A	2 lbs	9 lbs	45 lbs	500 lbs
CR-405B	0.4 lbs	1.8 lbs	9 lbs	100 lbs
CR-405 Kit	2.4 lbs	10.8 lbs	54 lbs	600 lbs

STORAGE AND SAFETY

Makobond CR 405 has a shelf life of 12 months from date of shipment when unopened and stored at ambient temperatures, (18-27°C). Nitrogen purging opened containers is recommended before re-sealing. CR 405B may darken over time, but this will have no effect on any finished product. Users need to exercise proper care while working with material; gloves, eyewear, and proper ventilation are recommended. Warning: All thermosetting matrix systems undergo exothermic reaction during vulcanization and/or curing, generating heat. If not properly managed, exothermic reactions may release possibly flammable or toxic gases into the surrounding. Users should exercise extreme caution when blending large volumes of ingredients (ie greater than 1 lb), and/or curing thick sections of components (typically greater than 0.200 inches). Users should monitor heat profiles of any curing or blended materials carefully and attentively during cure. Please contact a Mako team member with any concerns prior to use and/or to coordinate the proper management of safety and temperature monitoring process to avoid exothermic phenomena.