

MAKOBOND INFUSION RESIN 250

PRODUCT DESCRIPTION

Makobond IR 250 is a low viscosity high temperature infusion resin designed for composite tooling. IR 250 was designed to service parts over 400°F, this system is easy to mix and has excellent flow. The long pot life allows users to have plenty of working time to ensure long lasting parts.

PRODUCT HIGHLIGHTS

- LOW MIXED VISCOSITY
- 400°F SERVICE TEMPERATURE
- LONG POT LIFE

PRODUCT CHARACTERISTICS

	IR 250A	IR 250B
Viscosity @ 25°C	1,600 cps.	60 cps.
Specific Gravity	1.17	0.96
Color	Amber	Light Amber

PHYSICAL PROPERTIES

	Results	ASTM Method
Cured Hardness (Shore D)	88-92D	D2240
Flexural Strength (psi)	18,104 psi	D790
Flexural Modulus (psi)	474,369	D790
Compressive Strength (psi)	28,682 psi	D695
Tensile Strength (psi)	7,784 psi	D638
Tensile Modulus (psi)	428,400 psi	D638
Glass Transition Temperature, T _g , (DMA)	455°F	D4065

HANDLING PROPERTIES

Infusion Resin 250	
Mix Ratio By Weight, Resin, Hardener	100:44
Mix Ratio By Volume, Resin, Hardener	1.4:1
Mixed Viscosity @ 25°C	900 cps.
Pot Life @ 25°C	340-380 minutes

HANDLING AND CURING

Measure out the proper weights of IR 250 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. IR 250 will reach hardness after 18 hours if the tool is kept at 75°F. Light heat can be applied to accelerate cure. Vacuum should be held for the duration of IR 250 gel. A post cure is required to meet full properties, a slow step cure is recommended for IR 250 which should be similar to the following: 4 hours at 150°F, 1 hour at 200°F, 250°F, 300°F, and 350°F each. Followed by 2 hours at 400°F will result in a full cure.

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PACKAGING WEIGHTS

	Quart Kit	Gallon Kit	Pail Kit	Drum Kit
IR-250A	2 lbs	8 lbs	36 lbs	475 lbs
IR-250B	0.88 lbs	3.5 lbs	16 lbs	209 lbs
IR-250 Kit	2.88 lbs	11.5 lbs	52 lbs	648 lbs

STORAGE AND SAFETY

Makobond IR 250 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. IR 250B 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.