

BCC Resins BC 8010

Polyurethane

BCC Products Inc.

Message:

For several years BCC customers have requested a truly metal-like, fast setting urethane reproduction plastic that exhibits many of the desirable qualities of familiar BC 8002 Kwik-Kast. Introducing BC 8010 Metal-Kast, the result of extensive research and development aimed to achieve what you said you wanted in a machinable tooling plastic. Ideal for low temperature vacuum form tools, prototypes, models, display parts, patterns, keller aids and bulk back fill.

Handling Properties:

BCC's Metal-Kast is a fast-setting, two part casting system which requires carefull preparation prior to mixing parts A and B. Because Metal-Kast contains components of high density there will be some separation at the bottom of each container. Using a paint shaker, jiffy mixer, or mixing spatula, re-suspension of the ingredients is easily accomplished. Precaution should be taken to prevent any moisture contamination from containers or utensils. It is recommended that the work area be well ventilated and normal cleanliness and safety rules be observed. Avoid prolonged exposure to vapors and contact with skin.

Preparation of Mold Surface:

Clean the surface from dust and possible presence of moisture. Apply BC 87 Parting Agent and polish to a uniform high gloss finish (usually 2-3 coats are recommended). For plaster or wood surfaces seal with PVC sealer to ensure complete absence of moisture followed by 2-3 coats of 87 Parting Agent.

Mixing and Pouring:

Although not necessary, best results are obtained by evacuation of each component under 29 inches of vacuum which removes entrapped air prior to blending the two components. Pour weighed or measured amounts of Part A & B into a separate dry container by pouring Part A into Part B. Mix with a spatula or mechanical stirrer for 30-40 seconds for quart size batches or 40-50 seconds for gallon batches while avoiding air entrapment. Immediately pour mixed resin uninterrupted from a convenient height above the mold cavity. Clean your mixing tools by rinsing in an alcohol type solvent. Larger masses (2 feet or more) may be built up with successive pours. Castings may be demolded within 60-90 minutes but should be properly supported while "green". Under normal conditions, maximum hardness or cure will be achieved in 12-18 hours.

General Information			
Filler / Reinforcement	Aluminum		
Features	Fast Cure		
	Machinable		
	Thermally Conductive		
Uses	Modeling Material		
	Prototyping		
Appearance	Aluminum		
Forms	Liquid		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm ³	ASTM D792
--	1.61	g/cm ³	ASTM D1505
Molding Shrinkage - Flow	0.10	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	85		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Compressive Strength	67.2	MPa	ASTM D695

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	81.7	°C	ASTM D648
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Hardener	Mix Ratio by Weight: 1.0, Mix Ratio by Volume: 1.0		
Resin	Mix Ratio by Weight: 1.0, Mix Ratio by Volume: 1.0		
Pot Life (24°C)	5.0 to 6.0	min	
Thermoset Mix Viscosity	2650	cP	ASTM D2393
Demold Time (24°C)	480 to 720	min	

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