

RAKU-TOOL[®] PC-3403 (Polyol) / PH-3903 (Isocyanate) with Filler AC-9004

Polyurethane Casting System Two Component Mass Casting

Supplied by

AMBERCOMPOSITES

PC - Rev.-Status: 01- 2006/03/07

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Key Properties

- Can be cast in thick layers and large volumes
- Low exothermic reaction in layers >600-1000mm
With direct casting (filled) >250mm up to max. 350 mm
- High mechanical properties (filled and unfilled)
- Minimal shrinkage
- Superior interlayer adhesion
- Casting viscosity can be adjusted
- Easily repaired or modified
- Recyclable

Applications

- Metal sheet forming tools
- Production of undersized cores for foundry patterns / core boxes
- Vacuum forming molds
- RIM molds
- Molds for prototyping
- Suitable for a wide range of full and face casting

Processing Properties

			PC-3403	PH-3903	AC-9004
Color	visual		Beige	Yellowish	White
Mix ratio		pbw	100	80	
			100	80	380-400
Viscosity at 25 °C	ISO 2555	m Pa.s			

			PC-3403 / PH-3903	PC-3403 / PH-3903 / AC-9004
Mix viscosity at 25 °C	ISO 2555	m Pa.s		
Pot life at 25 °C	1000 ml	min	30-40	60
Layer thickness		mm	20	300
Demold time		h	18	18

Cured / Mechanical Properties

Cure: 7 days at RT or 14h at 40°C			PC-3403 / PH-3903	PC-3403 / PH-3903 / AC-9004
Appearance	visual		Beige	Beige
Density	ISO 1183	g/cm ³	1.2	1.6-1.7
Shore hardness D	ISO 868		75-80	85
Coefficient of thermal expansion	ISO 11359	10 ⁻⁶ K ⁻¹	90-95	45-50
Deflection temperature, HDT	ISO 75	°C	75-80	75-80
Compressive strength	ISO 604	MPa	85-90	90-95
Compressive modulus	ISO 604	MPa	2800-3000	9000-9500
Flexural strength	ISO 178	MPa	85-95	55-65
Linear shrinkage		mm / m	1.0	0.6

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Processing

Mix the two components thoroughly in the ratio indicated.

Degassing and /or post-curing will improve final properties.

The processing and material temperature should be between 20-25 °C.

Packaging

RAKU-TOOL® PC-3403 5 kg, 25 kg, 1000 kg

RAKU-TOOL® PH-3903 4 kg, 20 kg, 1000 kg

RAKU-TOOL® AC-9004 30 kg, 1000 kg

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label.

Partly used containers should always be sealed appropriately and used up as soon as possible.

Handling Precautions

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.

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