

Polyurethane Casting System

Two Component Casting

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Key Properties

- Can be cast in thick layers and large volumes
- Minimal shrinkage
- High mechanical properties
- Superior interlayer adhesion
- Easily repaired or modified
- Recyclable

Applications

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

Processing Properties

			PC-3432-1	PH-3932-1
Color	visual		White	Yellowish
Mix ratio		parts by weight	100	100
Mix ratio		parts by volume	100	90
Density	ASTM D-792	lb/ft ³ (g/cm ³)	ca. 64.9 (ca. 1.04)	ca. 73.7 (ca. 1.18)
Viscosity at 77°F (25°C)	ASTM D-2393	cP	400-600	30-50

PC-3432-1 / PH-3932-1

Pot life at 77°F (25°C)	61 in ³	min	20 – 30
Max. mass		g	100
Demold time		h	16

Cured / Mechanical Properties

Cure: 7 days at RT or 14h at 40°C

PC-3432-1 / PH-3932-1

Aspect	visual		White
Density	ASTM D-792	lb/ft ³ (g/cm ³)	ca. 72.4 (ca. 1.16)
Shore hardness D	ASTM D-2240		68 – 73 D
Coefficient of thermal expansion	ASTM D-3386	10 ⁻⁶ F ⁻¹ (10 ⁻⁶ K ⁻¹)	50 - 53 (90 – 95)
Deflection temperature, HDT	ASTM D-648	°F (°C)	109 - 118 (43 – 48)
Compressive strength	ASTM D-695	psi	9,860 – 10,600
Compressive modulus	ASTM D-695	psi	261,000 – 334,000
Flexural strength	ASTM D-790	psi	10,900 – 11,600
Flexural modulus	ASTM D-790	psi	290,000 – 363,000



Processing

The processing and material temperature should be between 68-77°F (20-25°C).

The A component needs to be stirred well before use as some fillers might be prone to sedimentation.

Mix the two components thoroughly in the ratio indicated.

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

Packaging

RAKU® TOOL PC-3432-1	52.8 gallons / 264.2 gallons (200 kg,1000 kg)
RAKU® TOOL PH-3932-1	52.8 gallons / 264.2 gallons (200 kg,1000 kg)

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (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.
