

Close Contour Paste

Machine dispensed epoxy paste

Key Properties

- Very dense, closed surface. Can be polished directly. No sealing necessary.
- Layer thickness 20 mm without slump on vertical surfaces
- Heat resistant up to 130°C after appropriate post-cure

Applications

- Tools
- Molds for direct Tooling

Processing Properties

			CP-6121 Resin	CP-6121 Hardener
Color	visual		Gray	White
Mix ratio		parts by weight	100	100
		parts by volume	100	100
Density	ASTM D-792	lb/ft ³ (g/cm ³)	ca. 78 (ca. 1.25)	ca. 78 (ca. 1.25)

			CP-6121 Resin / Hardener
Pot life at 77°F (25°C)	2.20 lbs (1000 ml)	min	30 – 40
Layer thickness		in (mm)	0.8 (20)
Machinable after at 77°F (25°C)		h	10

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Cured / Mechanical Properties

Cure: 10 h at 20-25°C + 14 h at 130°C

			CP-6121 Resin / Hardener
Aspect	visual		Gray
Density	ASTM D-792	lb/ft ³ (g/cm ³)	ca.78 (ca. 1.25)
Shore hardness D	ASTM D-2240		85 - 90
Coefficient of thermal expansion	ASTM D-3386	10 ⁻⁶ F ⁻¹ (10 ⁻⁶ K ⁻¹)	19 - 22 (35 - 40)
Deflection temperature, HDT	ASTM D-648	°F (°C)	266 - 275 (130 - 135)
Glass Transition Temperature, Tg	DSC	°F (°C)	275 - 284 (135 - 140)
Compressive strength	ASTM D-695	psi (MPa)	23,200 – 24,700 (160 – 170)
Compressive modulus	ASTM D-695	psi (MPa)	841,000 – 914,000 (5,800 - 6,300)
Flexural strength	ASTM D-790	psi (MPa)	10,200 – 11,600 (70 – 80)
Flexural modulus	ASTM D-790	psi (MPa)	769,000 – 841,000 (5,300 - 5,800)
Linear shrinkage*	ASTM D-2566	in / in (mm/m)	0.0015 (ca. 1.5)

*measured on 20 mm layer thickness after 7 days cure at RT

Processing

The processing and material temperature should be between 68-77 °F (20-25 °C), never below 64.4 °F (18 °C).

Set up parameters for dispensing machine are available on request.

Check the mixing ratio before attaching the mixer head.

Please ensure the constant supply of compressed air.

The longer the hose the higher the material pressure.

Avoid applying over 0.8 inches (20 mm) at once, for thicker layers it is recommended to apply the 2nd layer after the first one has gelled.

Recommended cure schedule

After initial curing at 68-77 °F (20-25°C) for 10 hours depending on the size and thickness of the models/tools, the models/tools must be heated up to 266 °F (130°C) in steps and post cured for 14 hours at 266 °F (130°C), then cooled down gradually. The curing time at room temperature, heating and cooling rate depend on the size and thickness of the model/tools.

Packaging

RAKU® TOOL CP-6121 Resin	110 pounds in 13.2 gallon drum (50 kg in 50L drum)
RAKU® TOOL CP-6121 Hardener	110 pounds in 13.2 gallon drum (50 kg in 50L drum)



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.
