RESINIFY — INSTRUCTIONS FOR USE (IFU)

NanoCeram (RT-CP4500) — High-Stiffness Nano-Ceramic Composite Resin For Ultra-Rigid, Precision Engineering Parts & Dimensional-Critical Components

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1. Product Overview

NanoCeram is a **nano-ceramic reinforced engineering resin** formulated for maximum stiffness, high dimensional accuracy, and extremely low thermal expansion. It is ideal for calibration tools, precision fixtures, molds, structural prototypes, and components requiring high stability under load.

2. Printer Compatibility

- LCD / mSLA / DLP systems
- 385–405 nm wavelength
- Eco and fast-mode compatible depending on printer

3. Printing Instructions

Parameter	Recommended
Layer Height	50 µm (recommended), 25–100 µm compatible
Normal Exposure	3.0–4.0 sec
Bottom Exposure	45–60 sec
Bottom Layers	6–8
Lift Speed	Medium
Light-Off Delay	Enabled

Support Tips:

- Use medium or heavy supports due to material rigidity.
- Angle large flat surfaces 20–30° to prevent peel distortion.
- Reinforce long, thin features to maintain dimensional integrity.

4. Cleaning Instructions

- Wash **3–4 minutes** in IPA or resin cleaner.
- Dry fully — nano-ceramic blends require complete solvent evaporation.
- Avoid ultrasonic cleaning to prevent micro-fracture initiation.

5. Post-Curing Instructions

- UV cure **25–35 minutes**.
- Optional heat cure **60°C for 15–20 minutes** to maximize modulus.
- Avoid temperatures over 70°C to prevent internal stress.

6. Usage Guidelines

- Best for precision mechanical parts, jigs, tooling inserts, calibration blocks.
- Outstanding thermal and dimensional stability.
- Produces a matte, ceramic-like finish.
- Machines well with carbide tools at slow speeds.
- Avoid hard impacts — ceramic composites can chip.

7. Safety & Disposal

- Wear gloves, mask, and eye protection.
- Avoid inhalation of sanding dust.
- Fully cure waste resin before disposal.
- Dispose of IPA according to local regulations.