Resinify JewelCast™

Instructions for Use (IFU) — High-Strength, High-Detail Castable Resin

Intended Use: For Jewelry Investment Casting

1. Product Overview

JewelCast is a premium, high-resolution castable resin engineered for exceptional strength, dimensional stability, and detail preservation. JewelCast is specifically designed for stone-setting jewelry, thick signet rings, and models that require both strength and clean burnout. Compared to WaxCast or CleanCast, JewelCast provides higher mechanical strength, better handling for heavy or large rings, excellent prong stability, and smooth surfaces ready for investment. This resin is ideal when clients need patterns that resist breakage but still burn out completely with minimal residue.

2. Intended Use

JewelCast is designed for:

- Stone-setting designs (prongs, channels, micro-pavé)
- Signet rings, bands, large/heavy jewelry pieces
- High-detail models requiring both strength and burnout compatibility
- Gold, silver, brass, bronze casting workflows
- DLP/mSLA printers (385–405 nm)

3. Storage & Handling

- Store at 18–28°C (65–82°F).
- Mix gently before printing — does not require heavy agitation.
- Filter resin before returning to bottle (190–220 µm filter).
- Keep resin covered during printing to avoid dust contamination.

4. Printing Instructions

Recommended baseline settings (50 µm layer thickness):

Setting	Recommendation
Layer Height	50 µm (25 µm for pavé)
Normal Exposure	3.0–4.0 sec
Bottom Exposure	35–50 sec
Bottom Layers	4–6

Setting	Recommendation
Lift Speed	Medium
Light-Off Delay	Enabled

Supports & Orientation:

- For prongs and channels: use many fine supports (0.25–0.35 mm).
- Angle large rings 30–45° to minimize cupping.
- Reinforce heavy sections to prevent deformation during peel.
- Use mid-supports on tall features to avoid drift.

> **NOTE:** The extra rigidity of JewelCast allows easier cleaning and handling before investment.

5. Cleaning Instructions

Two-Stage Wash:

1. Initial Wash (20–30 sec): Use clean IPA; swirl gently.
2. Secondary Wash (20–30 sec): Fresh IPA or TPM cleaner. Remove quickly to avoid surface softening.

Drying:

- Air-dry 10–15 minutes.
- Gently blow out cavities with compressed air.

> **ATTENTION:** JewelCast is stronger than wax-based resins but still should not be soaked in IPA for more than 1 minute.

6. Post-Curing Instructions

Low-to-Medium Cure (5–15 minutes):

- UV exposure for 10 minutes recommended.
- Keep temperature below 45°C (113°F).
- Over-curing may make casting slightly rough or increase ash content.

> **NOTE:** Unlike wax-filled materials, JewelCast tolerates slightly longer cures while still maintaining clean burnout.

7. Investing Instructions

Recommended Investments:

- R&R Plasticast, R&R Ultra-Vest, Gold Star investments
- Any gypsum-bonded investment designed for resin burnout

Investment Procedure:

1. Mix under vacuum for 90–120 seconds.
2. Light vibratory settling; avoid strong vibration for pavé settings.
3. Bench-set flasks for 2–3 hours before placing in the kiln.

> **ATTENTION:** Ensure the model is 100% dry before investing to prevent steam expansion or micro-fractures.

8. Burnout Schedule

Standard Gypsum-Bonded Investment Cycle:

Step	Temperature	Time
Ramp 1	Room Temp → 300°C (570°F)	2 hours
Hold	300°C	1 hour
Ramp 2	300°C → 730°C (1350°F)	2 hours
Hold	730°C	2–3 hours
Casting	500–600°C flask temp	—

For Heavy / Thick Jewelry Models:

- Extend 300°C hold to 2 hours.
- Extend 730°C hold to 3–4 hours.

> **NOTE:** Platinum casting — final burnout can be increased to 850°C if investment allows.

9. Casting Recommendations

JewelCast excels for casting: Gold (10K, 14K, 18K, 22K), Silver, Brass & Bronze.

Why JewelCast for Stone-Setting Models? Because it maintains crisp prongs, strong structural walls, better handling before burnout, and reliable detail reproduction.

Tips for Best Results:

- Ensure resin is cured evenly — no soft spots.
- Avoid over-cure (reduces burnout cleanness).
- Proper sprue placement ensures metal flow on thicker designs.

10. Post-Casting Cleanup

- Quench time varies by alloy: Silver/brass quench immediately after color transition; Gold requires a short cooling pause before quench.
- Ultrasonic cleaning removes investment faster.
- JewelCast produces a very clean inner cavity after burnout, minimizing polishing time.

11. Safety & Disposal

- Handle resin with gloves and eye protection.
- Avoid direct skin contact and inhalation of vapors.
- Cure used resin and dispose according to regulations.
- IPA waste must be disposed of properly; UV cure before disposal.

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