Figure 4™ JCAST-GRN 10

Jewelry Castable

Optimized for clean and easy burnout of finely detailed, high-resolution jewelry patterns for direct casting

Figure 4

OUTSTANDING DETAIL AND RESOLUTION FOR JEWELRY CASTING

Designed for the jewelry casting professional, Figure 4 JCAST-GRN 10 produces accurate, reproducible, and highly detailed master patterns for jewelry casting. This high contrast green material is easy to cast with minimal ash and residue, producing high quality jewelry pieces rapidly.

Liquid Material

MEASUREMENT	CONDITION	VALUE	
Viscosity	@ 25 °C (71 °F)	190 cps	
Color		Green	
Solid Density	@ 25 °C (77 °F)	1.18 g/cm³	0.043 lb/in³
Liquid Density	@ 25 °C (77 °F)	1.09 g/cm³	0.039 lb/in³
Package Volume		1 kg bottle - Figure 4 Jewelry and Standalone	
Layer Thickness* Standard Mode Figure 4 Jewelry Mode		 0.02 mm 0.03 mm	 0.0008 in 0.0012 in
Vertical Build Speed* Standard Mode Figure 4 Jewelry Mode		 8 mm/hr 16 mm/hr	 0.3 in/hr 0.6 in/hr

* Standard Mode is available for Figure 4 Standalone and Production printers; Figure 4 Jewelry Mode is available for all Figure 4 printers.

APPLICATIONS

- Production master patterns for gypsum investment casting of:
  - A wide range of jewelry pieces
  - Rings
  - Brooches
  - Bracelets
- Suitable for a range of precious metals
- Highly detailed models for design validation, customer samples, etc.

BENEFITS

- Produces high quality castings
- High detail and feature resolution
- High accuracy and repeatability
- Easy feature visualization
- Direct casting, no tooling required

FEATURES

- Easy pattern burnout
- Strong/shippable patterns

3D SYSTEMS®

Post-Cured Material

MECHANICAL PROPERTIES			
MEASUREMENT	**CONDITION**	**METRIC**	**U.S.**
Tensile Strength (MPa | PSI)	ASTM D638	13.7	1990
Tensile Modulus (MPa | KSI)	ASTM D638	262	38
Elongation at Break	ASTM D638	12 %	
Coefficient of Thermal Expansion (CTE) (ppm/°C | ppm/°F) > Tg	ASTM E831	143	79
Hardness, Shore	ASTM D2240	68D	
Water Absorption	ASTM D570	1.3 %	

Material Processing Instructions

MIXING INSTRUCTIONS

1 kg bottle for Figure 4 Jewelry and Standalone

- Roll bottle for 1 hour on 3D Systems LC-3D Mixer for first use
- Roll for 10 minutes before subsequent uses

Use the Resin Mixer to stir material in the tray for 30 seconds between print jobs.

THREE OPTIONS FOR CLEANING

1. Sonication in IPA
   - Rinse in IPA ≤ 3 min.
2. Non-flammable Sonication
   - Wash in Propylene Carbonate ≤ 5 min.
   - Rinse in 5 wt% Elma Tec A4 solution ≤ 5 min.
3. Manual cleaning
   - Rinse in clean IPA ≤ 3 min.

DRYING INSTRUCTIONS

Ambient or air dry ≥ 1 hour or oven dry 50°C (122°F) 10 min.

UV CURE TIME

3D Systems LC-3DPrint Box UV Post-Curing Unit: 30 minutes

More details can be found in the User Guide available at http://infocenter.3dsystems.com/

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