

# VARIETY AND CHARACTER

### **JEWELRY RESIN**





The zWAX is designed for low investment, high return casting in practices such as jewelry. It burns clean and leaves no residue or ahses afterwards, which makes it great for on-the-spot rapid production.

zWAX AMBER								
	METRIC <sup>1</sup>		IMPERIAL <sup>1</sup>		METHOD			
	Green <sup>2</sup>	Post-Cured <sup>3</sup>	Green <sup>2</sup>	Post-Cured <sup>3</sup>				
Tensile Properties								
Tensile Strength	2.81MPa	8.48 MPa	407.45psi	1229.6 psi	ASTM D 638-14			
Elongation at Break	11.3%	15.0 %	11.3%	15.0 %	ASTM D 638-14			
Modulus	27.91MPa	71.91 MPa	4046.95psi	10426.95 psi	ASTM D 638-14			
Flexural Properties								
Flexural Strength	2.79 MPa	5.39 MPa	404.55 psi	781.55 psi	ASTM D 790-15			
Flexural modulus	54.62 MPa	121.24 MPa	7919.9 psi	17579.8 psi	ASTM D 790-15			
Impact properties								
Notched izod (Machined)	12.37 J/m	11.07 J/m	0.23 ft-lbf/in	0.21 ft-lbf/in	ASTM-D256-10			

#### NOTES:

- 1. Material properties can vary with part geometry, print orientation, print settings and temperature.
- 2. Data was obtained form green parts, printed using, 100  $\mu$ m, Clear settings, without additional treatment.
- 3. Data was obtained form green parts, printed using, 100  $\mu$ m, Clear settings and post–cured with 600 mW/cm2 of 405 nm LED light at 25°C for 10 min.



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zWax Purple contains 10% liquid wax. It delivers high accuracy and offers low thermal-expansion during burnout, which makes it perfect for pendant making and any jewelry components that have a thick surface area.

Below are the properties of zWax Purple. Product properties may change without notice.

zWAX PURPLE								
	METRIC <sup>1</sup>		IMPERIAL <sup>1</sup>		METHOD			
	Green <sup>2</sup>	Post-Cured <sup>3</sup>	Green <sup>2</sup>	Post-Cured <sup>3</sup>				
Tensile Properties								
Tensile Strength	7.10MPa	9.56MPa	1029.5psi	1386.2psi	ASTM D 638-14			
Elongation at Break	29.73%	29.28%	29.73%	29.28%	ASTM D 638-14			
Modulus	26.75MPa	38.28MPa	3878.75psi	5550.6psi	ASTM D 638-14			
Flexural Properties								
Flexural Strength	4.77MPa	7.11MPa	691.65psi	1030.95psi	ASTM D 790-15			
Flexural modulus	102.5MPa	186.12MPa	14862.5psi	26987.4psi	ASTM D 790-15			
Impact properties								
Notched izod (Machined)	13.83J/m	11.62J/m	0.26ft-lbf/in	0.22ft-lbf/in	ASTM-D256-10			

#### NOTES:

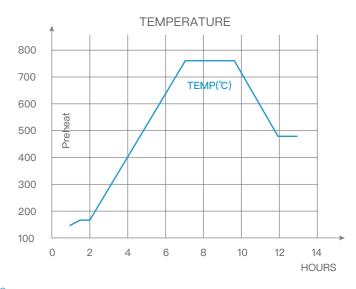
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- 2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
- 3. Data was obtained form green parts, printed using, 100  $\mu$ m, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25°C for 10 min.



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### **UNIZ zWax Resin Burnout Process**

The following is the recommended burnout cycle for both zWAX Amber and zWAX Purple resins. Results may vary depending on the casting system. Adjustments to the curve may be applied to obtain the optimal results.



#### NOTES:

- 1. Clean printed parts thoroughly with isopropyl alcohol (IPA) or UNIZ's TotalCure®, then dry naturally or with compressed air before post-curing.
- 2. Post-cure the parts for 10 minutes under 405nm 10W UV LED light before casting.