

## Wieland Porta Optimum PFM Alloy

Category : Metal , Nonferrous Metal , Precious Metal , Gold Alloy

### Material Notes:

All-purpose alloy for low-fusing high expanding ceramics Applications: inlays/onlays, crowns, short span bridges, long span bridges, telescopic and milling works, removable partials, ceramic veneering, acrylic veneeringDental

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Wieland-Porta-Optimum-PFM-Alloy.php](http://www.lookpolymers.com/polymer_Wieland-Porta-Optimum-PFM-Alloy.php)

Physical Properties	Metric	English	Comments
Density	16.0 g/cc	0.578 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	190	190	HV5/30; after porcelain firing
	220	220	HV5/30; hardened
Tensile Strength, Yield	440.0 MPa @Strain 0.200 %	63820 psi @Strain 0.200 %	after porcelain firing
	480.0 MPa @Strain 0.200 %	69620 psi @Strain 0.200 %	hardened
Elongation at Break	6.0 %	6.0 %	hardened
	8.0 %	8.0 %	after porcelain firing
Modulus of Elasticity	100 GPa	14500 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	16.1 $\mu\text{m}/\text{m}\cdot\text{°C}$	8.94 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 25.0 - 500 $\text{°C}$	@Temperature 77.0 - 932 $\text{°F}$	

Component Elements Properties	Metric	English	Comments
Copper, Cu	2.9 %	2.9 %	
Gold, Au	69.8 %	69.8 %	
Indium, In	2.0 %	2.0 %	
Platinum, Pt	9.6 %	9.6 %	
Rhodium, Rh	0.50 %	0.50 %	

Component Elements Properties	Metric	English	Comments
Zinc, Zn	2.0 %	2.0 %	

Processing Properties	Metric	English	Comments
Processing Temperature	699 °C	1290 °F	Preheating Temp.
Melt Temperature	921 - 1040 °C	1690 - 1900 °F	
Casting Temperature	1120 °C	2050 °F	

Descriptive Properties	Value	Comments
Color	yellow	

## Contact Songhan Plastic Technology Co.,Ltd.

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