

3M Z100™ Restorative Dental Composite

Category : Polymer , Thermoset , Methacrylate

Material Notes:

3M™ Z100™ restorative is an all purpose, esthetic, light cured dental composite. 3M Restorative Z100 features a translucency and opalescence similar to that of natural teeth and is used for porcelain repair and metal masking. Bonding to tooth structure is accomplished by using a dental adhesive system, such as 3M™ Single Bond or 3M™ Scotchbond Multi-Purpose Adhesive Systems. The restorative is available in a variety of shades and is packaged in syringes or capsules. The matrix of this composite is a resin consisting of BIS-GMA (Bisphenol A diglycidyl ether dimethacrylate) and TEGDMA (tri[ethylene glycol] dimethacrylate). This light-cured resin is filled with 66% (volume) silica/zirconia. The filler average particle size is 0.6 µm. Filtek P60 exhibits higher volumetric shrinkage upon curing than 3M™ Filtek™ P60 or Filtek™ Z250. An example from the manufacturer shows shrinkage of 2.4% after 5 minutes and 2.6% after 30 minutes; sample geometry will effect actual values. Wet fracture toughness is 1.3 MN/m. The wear rate in an in-vitro 3-body wear test gives 2.2 µLoss/39,000 cycles. Compared to other dental composites, it has a medium-high diametral tensile strength, medium-high compressive strength, high compressive modulus, medium-high flexural strength and a high flexural modulus. Information provided by 3M. Contact 3M for further information before specifying or using this product.

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Z100-Restorative-Dental-Composite.php

Physical Properties	Metric	English	Comments
Viscosity	3.00e+6 cP	3.00e+6 cP	target viscosity before cure

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	71	71	Bottom of sample; cure light intensity of 660 mWatts/cm². C2 shade.
	85	85	Top of sample; cure light intensity of 660 mWatts/cm². C2 shade.
Tensile Strength, Ultimate	105 MPa	15200 psi	Diametral tensile strength
Flexural Yield Strength	135 MPa	19600 psi	
Flexural Modulus	14.5 GPa	2100 ksi	
Compressive Yield Strength	470 MPa	68200 psi	
Adhesive Bond Strength	28.0 MPa	4060 psi	Bond strength to dentin using a dental adhesive system; C2 color

Processing Properties	Metric	English	Comments
Processing Temperature	20.0 °C	68.0 °F	Light cured

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China