

Category: WindowsFlexural strength and surface hardness of esthetic dental materials. The flexural strengths of porcelain, metal and resin restoratives and the hardness of the surface of porcelain and resin were measured using a universal testing machine. Mean values (MPa) were: (a) porcelain: 24.0, metal: 64.3, resin: 43.3. (b) Porcelain: 36.3, metal: 87.0, resin: 45.1. Flexural strength of the metal did not significantly differ from that of the porcelain. For both porcelain and metal, the flexural strength increased with the load. The flexural strengths of porcelain and metal are higher than those of resin. The values of hardness of porcelain were in the order: A2 > A1 > A3. The values of hardness of resin were in the order: A3 > A2 > A1. It is concluded that porcelain, metal and resin have similar flexural strengths, but the flexural strengths of porcelain are higher than those of resin. Both hardness and flexural strength of porcelain increased with the load.

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