Valux™ Plus Restorative

Competitive Product Comparison

Charisma® Microglass® Universal Hybrid Composite
Manufactured by Heraeus Kulzer

Summary – Valux Plus Restorative offers these advantages:
- Valux Plus restorative exhibits higher flexural strength and diametral tensile strength than Charisma. Higher flexural strength and diametral tensile strength help to increase the durability of a restoration.
- The volumetric shrinkage of Valux Plus restorative is similar to Charisma.

**In-Vitro Wear**
The in-vitro wear rate of Valux Plus restorative and Charisma were determined by an in-vitro 3-body wear test for 156,000 cycles.

Valux Plus is more in-vitro wear resistant than Charisma.

**Flexural Strength**
Flexural strength combines the forces found in compression and tension. The flexural strength of Valux Plus restorative was compared to Charisma.

Valux Plus restorative exhibits significantly greater flexural strength than Charisma.

**Diametral Tensile Strength**
Diametral tensile strength is a measurement obtained when compressive forces are applied to the sides of a sample. The diametral tensile strength of Valux Plus restorative was compared to Charisma.

Valux Plus restorative exhibits significantly greater diametral tensile strength than Charisma.

**Volumetric Shrinkage**
The volumetric shrinkage of Valux Plus restorative was compared to Charisma using the test methodology described by Watts and Cash.

Valux Plus restorative exhibits similar volumetric shrinkage than Charisma.
### Indications
- Class I-V fillings
- Adjustments of shapes and shades
- Splinting of teeth which are traumatically loose
- Diastema closure
- Restorations of primary teeth
- Adjustments of developmental teeth defects

### Manufacturer’s Claims
- High Strength
- High Wear Resistance
- 16 lifelike Vita® shades

- Unique, single filler is 100% zirconia/silica which allows more particles per gram of paste, resulting in excellent strength and wear resistance
- Excellent handling characteristics allow for easy placement and a lack of resin stickiness so the material will release easily from your instrument
- Blends with surrounding tooth color for a more natural finish

### Composition
- Based on a BIS-GMA matrix and contains 64% filler by volume: Barium aluminum fluoride glass (0.02 - 2 microns)
- Highly dispersive Silica (0.02 – 0.07 microns)

- Resin: Bis-GMA and TEGDMA
- Patented Synthetic mineral of zirconia/silica
- Inorganic filler loading is 66% by volume with a particle size range of 3.5 to 0.01 micron

### Shade and Curing Times

| Shade A1, A2, A3, A3.5, B1, B2, B3, C2, C3, D3, Incisal, SL, SLO, SLT | 2.0mm incremental placement | 20 second cure time |
| Shades A1, A2, A3, A3.5, B2 | 2.5mm incremental placement | 40 second cure time |
| Shades A4, C4, DB, OA2, OA3, OA3.5, OB2, YB | 2.0mm incremental placement | 40 second cure time |

*Information obtained from Heraeus Kulzer Website or Charisma Instructions for Use*