Estelite Flow Quick

High Flow and Medium Flow
Tokuyama’s Restorative Family

- **Estelite Flow Quick HF**
  - High Flow
  - 4 Shades

- **Estelite Flow Quick**
  - Medium Flow
  - 17 Shades

- **Estelite Sigma Quick**
  - Universal
  - 20 Shades

All Offer a Reduced Curing Time (10 seconds)
Components & Technology

Estelite Flow Quick High Flow
Components

**Photo Initiator**
- CQ
- RAP (Radical Amplified Photopolymerization)
- 68% wt

**Filler**
- Spherical “Supra-Nano”
- SiO2-ZiO2 (400nm & 70nm)

**Acrylic Monomers**
- Bis-GMA
- TEGDMA

[Image of SEM micrograph of nanoparticle distribution with a scale bar indicating 1um.]
Conventional Photo-initiator

RAP Technology

Radical Amplified Photopolymerization Initiator System
Filler

Estelite Flow Quick High Flow
Conventional Method

Sol-gel Method

Raw material: Metal Alkoxide

M(OR)x + Si(OR)4 → SiO₂⁻MOx
M; Zr, Ti

Spherical particles are grown

Conventional Method
Indications

- Direct anterior and posterior restorations (small, shallow tunnel preps)
- Cavity lining
- Blocking out undercuts
- Repair of porcelain or composite
Features

✓ Adequate Working Time
  ✓ 90 seconds

✓ Quick Curing Time
  ✓ 10 seconds

✓ Excellent Esthetics
  ✓ High glossiness and smoothness
  ✓ High shade stability
Features

✓ Excellent Physical Properties
✓ Flexural strength 160 MPa
✓ Compressive strength 458 MPa
✓ Radiopaque

✓ Optimal Handling
✓ Ideal flow, perfect for cavity lining
Features

✓ Syringe Design
  ✓ Easy and comfortable to dispense
  ✓ Less waste
  ✓ Larger capacity (2ml or 3.6g versus 1ml or 1.8g)
Viscosity

Comparing the Viscosity of Market Leader Flowables
Viscosity

Estelite LV High Flow
Estelite LV Medium Flow
Estelite Flow Quick
Estelite Flow Quick High Flow
Tetric Evo Flow
Supreme XT Flowable
Majesty Flow
Estelte Flow Quick
Premise Flowable
Tetric Flow
EsthetX Flow
Estelite LV Low Flow
Viscosity

Estelite Flow Quick HF / Estelite Flow Quick

1 minute vertical position (37°C)

2 minutes horizontal position (37°C)
Syringe Design

Estelite Flow Quick High
Flow &
Estelite Flow Quick
Syringe Design

- Large syringe barrel and wings
  - Easy to hold and dispense
  - Tinted plunger and large shade identification sticker
  - Easy to find

- Stainless steel tip
- Minimal leakage after dispensing
  - Less waste
Minimal Leakage

More flow after dispensing: Revolution Formula 2

Less flow after dispensing: Estelite Flow Quick HF
PLT for High Flow and Medium Flow
Shade Availability
Masking Ability of OPA2

Estelite Flow Quick HF is placed on a white board with a black spot.

Estelite Sigma Quick A3 is layered.

Black spot is still observed.

Black spot is almost masked.

EFQ-HF

ESQ-A3 EFQHF
Physical Properties

Estelites Flow Quick High Flow
Working Time Under Dental Light

Data Provided By: Tsukuba Research Center
Polymerization Shrinkage

Low Shrinkage 3.0% Linear

- Flow Quick HF
- Flow Quick
- Filtek Supreme XT
- Tetric Flow
- Revolution 2
- Venus Flow
- Grandio Flow

Data Provided by: Tsukuba Research Center
Flexural Strength

Data Provided By: Tsukuba Research Center
Compressive Strength

Data Provided By: Tsukuba Research Center

MPa

Flow Quick HF
Flow Quick
Filtek Supreme XT
Tetric Flow
Revolution 2
Venus Flow
Grandio Flow
Shade Stability

Minimal Color Change

Data Provided By:
Tsukuba Research Center

Variation of color tone $\Delta E^*$
Radiopacity

Easily Detected

Radiopacity: 180%Al
<table>
<thead>
<tr>
<th>Product</th>
<th>Flexural Strength (MPa)</th>
<th>Flexural Modulus (GPa)</th>
<th>Compressive Strength (MPa)</th>
<th>Shrinkage (%)</th>
<th>Filler Load (wt%)</th>
<th>Working Time (sec)</th>
<th>Color Change (ΔE*)</th>
<th>Glossiness (%)</th>
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</thead>
<tbody>
<tr>
<td>EFQ High Flow (Tokuyama)</td>
<td>160</td>
<td>9.6</td>
<td>458</td>
<td>3.0</td>
<td>68</td>
<td>90</td>
<td>3.2</td>
<td>90</td>
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<tr>
<td>EFQ (Tokuyama)</td>
<td>156</td>
<td>8.5</td>
<td>391</td>
<td>2.4</td>
<td>71</td>
<td>90</td>
<td>4.9</td>
<td>93</td>
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<tr>
<td>Supreme XT Flow (3M)</td>
<td>137</td>
<td>7.6</td>
<td>401</td>
<td>3.0</td>
<td>(65)</td>
<td>65</td>
<td>5.2</td>
<td>57</td>
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<tr>
<td>Tetric Evo Flow (Ivoclar)</td>
<td>127</td>
<td>6.0</td>
<td>398</td>
<td>N/A</td>
<td>(61.5)</td>
<td>N/A</td>
<td>10.6</td>
<td>66</td>
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<tr>
<td>Revolution 2 (Kerr)</td>
<td>104</td>
<td>5.6</td>
<td>365</td>
<td>3.9</td>
<td>(60)</td>
<td>35</td>
<td>7.2</td>
<td>71</td>
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<tr>
<td>Venus Flow (Heraeus)</td>
<td>145</td>
<td>6.0</td>
<td>331</td>
<td>3.6</td>
<td>(62)</td>
<td>70</td>
<td>11.5</td>
<td>66</td>
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<tr>
<td>Grandio Flow (Voco)</td>
<td>136</td>
<td>11.6</td>
<td>372</td>
<td>2.0</td>
<td>(80)</td>
<td>40</td>
<td>11.6</td>
<td>19</td>
</tr>
</tbody>
</table>

Data Provided By: Tsukuba Research Center
Clinical Cases

Provided By:  
Dr. Kazunori Otani
Before

After

Estelte Flow Quick HF OPA2 & Estelte Sigma Quick OA2, A2
Estelite Flow Quick HF OPA2

After

Estelite Sigma Quick OA2, A2
Case 3

Estelite Flow Quick HF A2
Case 4

Before

After

Estelite Flow Quick HF OPA2

&

Estelite Sigma Quick A1
Summary
Summary

✔ **Time**
  ✔ Reduced curing time (10 seconds)
  ✔ Extended working time under dental light (90 seconds)

✔ **Optimal Handling**
  ✔ Ideal flow, perfect for cavity lining
Summary

**✓ Syringe Design**
- Less waste
- Larger syringe capacity (2ml or 3.6g versus 1ml or 1.8g)

**✓ PLT Design**
- Targeted placement
- Easy and comfortable to dispense
Summary

✔ Superior Physical Properties
  ✔ Flexural strength (160 MPa)
  ✔ Compressive strength (458 MPa)
  ✔ Radiopaque (180% Al)

✔ Excellent Esthetics
  ✔ High glossiness and smoothness
  ✔ Shade stability
Shade Availability

A1, A2, A3, A3.5, A4
B1, B2, B3, B4
C1, C2, C3
OA1, OA2, OA3, CE, BW
Shades: A1, A2, A3, OPA2

Refills Only: 1 Syringe 2ml (3.6g) x 15 tips