**Venus Diamond with iBond Total Etch and iBond Self Etch**

**ONE-YEAR CLINICAL PERFORMANCE**

**RATING SYSTEM:** Excellent ++++  Very Good +++  Good +++

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**Description**

*Venus Diamond* is a radiopaque, nano-hybrid composite with a packable consistency. *Venus Diamond* is indicated for all classes of anterior and posterior restorations and may be used with any suitable bonding agent. *Venus Diamond* is available in both syringe and unit dose (PLT) delivery in 23 shades. *iBOND Total Etch* is a light-cured adhesive used in conjunction with phosphoric acid etchant. It contains nanofillers in an ethanol solvent and can be applied in one coat. *iBOND Self Etch* is a light-cured, self-etching, one-component bonding agent. Light curing time for both adhesives is 20 seconds. *iBOND* is available in both 4 mL bottles and single-dose delivery.

**Purpose**

The purpose of this evaluation was to monitor the clinical performance of *Venus Diamond* restorations bonded with *iBOND Total Etch* and *iBOND Self Etch* at one year.

**Clinical Evaluation Protocol**

- 120 *Venus Diamond* restorations were placed.
- 108 restorations were recalled during the first year after placement.
- Anterior and posterior restorations were included (Figures 1 and 2).
- Restorations were bonded with *iBOND Total Etch* and *iBOND Self Etch* (Table 1).
- At recall, restorations were evaluated for resistance to fracture/chipping, esthetics, resistance to marginal discoloration, wear resistance, lack of sensitivity and retention.
- Restorations were evaluated on a 1-5 rating scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

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**TABLE 1**

<table>
<thead>
<tr>
<th>Venus Diamond</th>
<th># Placed</th>
<th># Recalled</th>
</tr>
</thead>
<tbody>
<tr>
<td>with iBOND Self-Etch</td>
<td>84</td>
<td>76</td>
</tr>
<tr>
<td>with iBOND Total-Etch</td>
<td>36</td>
<td>32</td>
</tr>
</tbody>
</table>

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**Consultants’ Comments**

“Excellent esthetics.”

“Good radiopacity.”

“Strong composite for posterior restorations.”

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**FIGURE 1**

Venus Diamond/iBOND Self-Etch Restorations Recalled

- Class I: 78%
- Class II: 18%
- Class III: 4%

**FIGURE 2**

Venus Diamond/iBOND Total-Etch Restorations Recalled

- Class I: 38%
- Class II: 25%
- Class III: 16%
- Class IV: 12%
- Class V: 9%
One-year Clinical Performance

**Venus Diamond with iBond Total Etch and iBond Self Etch One-year Clinical Performance**

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### Clinical Observations

#### Resistance to Fracture/Chipping

*Venus Diamond* proved to be a durable restorative material during this first year after placement. No instances of fracture or chipping were observed in any of the restorations recalled (Figure 3).

#### Esthetics

*Venus Diamond* was used mainly in posterior applications, and 96% of the recalled restorations received ratings of “excellent” for esthetics. Five restorations (4%) had a slight fault in color match to the tooth (Figure 3).

#### Resistance to Marginal Discoloration

*Venus Diamond* exhibited excellent resistance to staining at the margins of the restorations (Figure 3). No staining was seen in any of the restorations bonded with *iBond Total-Etch*. Three (4%) of the restorations bonded with *iBond Self-Etch* showed minor marginal staining.

#### Wear Resistance

No visible signs of wear were noted on the *Venus Diamond* restorations recalled (Figure 3).

#### Lack of Sensitivity

Patients were questioned about sensitivity at their recall appointments; no sensitivity was reported (Figure 3).

#### Retention

All patients recalled had intact restorations during the first year after placement (Figure 3). No de-bonds occurred.

### Summary

*Venus Diamond* restorations bonded with *iBond Total Etch* and *iBond Self Etch* were evaluated at one year. Excellent ratings were observed for resistance to fracture/chipping, esthetics, resistance to marginal discoloration, wear resistance, lack of sensitivity and retention. *Venus Diamond/iBond* received a 99% clinical performance rating.

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**FIGURE 3: Results of *Venus Diamond* / *iBond* at One-year Recall**

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to Fracture/Chipping</td>
<td>5.0</td>
<td>4.9</td>
<td>4.9</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Esthetics</td>
<td>4.9</td>
<td>4.9</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Resistance to Marginal Discoloration</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Wear Resistance</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Lack of Sensitivity</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Retention</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>