### Product Description
A structured, fixed abrasive composite pad consisting of an inorganic abrasive (vitreous diamond agglomerates) in an organic binder (cross-linked polymer) capable of lapping a multitude of substrates on varied equipment and processes.

### Key Features
- Eliminates messy slurries
- Produces superior surface finish to slurry
- Reduces overall process time
- Reduces waste disposal costs
- Eliminates lap plate replacement
- Fits on any lapping machine

### Grades and Sizes
- Available in 3, 6 and 9 micron grades and includes PSA backing.
- Manufactured to any shape, with any hole size and hole configuration.
- For discs or sheets smaller than 9", specify 3M™ Trizact™ Diamond Tile 677XA Type PC.
- Polycarbonate backing adds rigidity to larger discs.
- For discs or sheets greater than 9" and less than 47", 3M™ Trizact™ Diamond Tile 677XA Type PC pads will come in one piece.
- For discs or sheets greater than 47", 3M™ Trizact™ Diamond Tile 677XA Type PC pads will come in four pieces.

### Grade Selection
Grade selection is based on material type and process requirements. The smallest micron grade that will give stable cut rate for a given material is recommended. Using the smallest possible micron grade will result in a finer rough lap finish, reducing polish time by up to 50%.

### Equipment
Trizact™ Diamond Tile 677XA is designed to work with double and single sided lapping machines and can be directly mounted on most plate material types or geometry.

### Directions for Use
Reference the following Technical Application Bulletins for detailed information on use of Trizact™ Diamond Tile 677XA:
- Machine Prep and Pad Mounting Instructions
- Lubricant Use and Filtering Instructions
- Pad Conditioning Instructions
- Frequently Asked Questions
Typical Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Borofloat™ Glass</th>
<th>Pyrex® Glass</th>
<th>BK7 Glass</th>
<th>Fused Quartz</th>
<th>Window Glass</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 micron</td>
<td>58 µm/min</td>
<td>55 µm/min</td>
<td>22 µm/min</td>
<td>58 µm/min</td>
<td>n/a</td>
</tr>
<tr>
<td>Ra = 1575 Å</td>
<td>Ra = 1625 Å</td>
<td>Ra = 1629 Å</td>
<td>Ra = 657 Å</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rt = 1.408 µm</td>
<td>Rt = 1.545 µm</td>
<td>Rt = 1.455 µm</td>
<td>Rt = 0.6437 µm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6 micron</th>
<th>105 µm/min</th>
<th>115 µm/min</th>
<th>76 µm/min</th>
<th>69 µm/min</th>
<th>43 µm/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ra = 2352 Å</td>
<td>Ra = 2495 Å</td>
<td>Ra = 2513 Å</td>
<td>Ra = 951 Å</td>
<td>Ra = 2814 Å</td>
<td></td>
</tr>
<tr>
<td>Rt = 2.169 µm</td>
<td>Rt = 2.316 µm</td>
<td>Rt = 2.284 µm</td>
<td>Rt = 0.9865 µm</td>
<td>Rt = 2.503 µm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9 micron</th>
<th>181 µm/min</th>
<th>165 µm/min</th>
<th>105 µm/min</th>
<th>89 µm/min</th>
<th>72 µm/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ra = 3035 Å</td>
<td>Ra = 3152 Å</td>
<td>Ra = 3842 Å</td>
<td>Ra = 1336 Å</td>
<td>Ra = 3499 Å</td>
<td></td>
</tr>
<tr>
<td>Rt = 2.580 µm</td>
<td>Rt = 2.827 µm</td>
<td>Rt = 3.429 µm</td>
<td>Rt = 1.0792 µm</td>
<td>Rt = 3.061 µm</td>
<td></td>
</tr>
</tbody>
</table>

Double sided lapping on Peter Wolters AC 500 machine.
2 psi, 96 rpm, 200 ml/min flow rate, 5% Sabrelube® 9016 in water
5 minute cycles, ten 65mm diameter substrates
* Data is an average of four 1.1mm scans with a 0.25µm tip radius and 250 µm cut off
** 10% Sabrelube® 9016 in water

Storage

Pads should be stored flat, in a clean environment. Stacking up to 8 pads, or pad segments, is acceptable. Do not store pads on edge.


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