

## 3M™ Trizact™ Composite Slurry DT-100, 1.5 Micron

### Product Description

3M™ Trizact™ Composite Slurry DT-100, 1.5 Micron is a low viscosity lapping slurry designed for finishing ultra-hard substrates such as sapphire and silicon carbide. Comprised of a unique 1.5 µm diamond composite in triethylene glycol, Trizact slurry DT-100, 1.5 micron produces good surface finish with high removal rates for economical lapping. Triethylene glycol is water miscible for easy cleanup. Trizact slurry DT-100, 1.5 micron is designed for the highest performance when used with 3M™ Trizact™ Polishing Pads.

### Key Advantages

- High removal rate
- Good surface finish
- Easy cleanup with water
- Compatible with 3M™ Trizact™ Polishing Pads

### Product Construction/Material Description

#### 3M™ Trizact™ Composite Slurry DT-100, 1.5 Micron

Property	Value
3M™ Trizact™ Composite Slurry Grade	1.5 µm
Carrier Liquid	Triethylene glycol
Abrasive Content	1.0%
Packaging	20 kg / 5 gallon plastic pail

### Applications

- Fine lapping of ultra-hard substrates such as sapphire
- Fine lapping for silicon carbide (SiC), zirconia (ZrO<sub>2</sub>), glass, silicon oxide and silicon materials
- Slurry can be used with either single- or dual-sided lapping tools

### Application Techniques

- Use with 3M™ Trizact™ Polishing Pads\*
- Mix slurry well before use, ensure that no sediment remains in the bottom of the container
- Continue mixing during use
- Pump mixed slurry to the polishing tool at a uniform rate
- Pre-condition the Trizact polishing pads with slurry by running empty carriers before using pads for the first time
- Lapping pressures of 3-5 psi are recommended for higher removal rates

\*See the 3M™ Trizact™ Polishing Pads Technical Data Sheet for more information.

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## 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.

### 3M™ Trizact™ Composite Slurry DT-100, 1.5 Micron – Double Sided Lapping

Polishing Pad	Plane	Removal Rate (µm/min)	Ra (nm)
3M™ Trizact™ Polishing Pad H-80-PC	A-Plane	1.7	15
3M™ Trizact™ Polishing Pad H-80-PC	C-Plane	1.3	16
3M™ Trizact™ Polishing Pad HT-800-PC	A-Plane	1.5	14
3M™ Trizact™ Polishing Pad HT-800-PC	C-Plane	1.1	13

Process Conditions	
Pad Diameter (OD x ID)	18.3" x 7.1" (465 mm x 180 mm)
Platen Speed	Upper: 65 rpm Lower: 65 rpm Sun Gear: 13 rpm
Slurry Flow Rate	6 ml/min
Downforce	4.1 psi
Polishing Time	30 min
Wafers/Parts	Nine 2" (51 mm) diameter sapphire

\*Initial removal rates are higher with higher incoming Ra

## Storage and Shelf Life

The shelf life of 3M™ Trizact™ Composite Slurry DT-100, 1.5 Micron is 24 months from the date of manufacture when stored flat in the original packaging materials at 21°C (70°F) and 50% relative humidity.

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## Electronics Materials Solutions Division

3M Center, Building 224-3N-11  
St. Paul, MN 55144-1000  
1-800-251-8634 phone  
651-778-4244 fax  
[www.3M.com/electronics](http://www.3M.com/electronics)

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