
3M
Science.
Applied to Life.™
3M™ Trizact™ Composite
Slurry and Pad Products
Smarter.
Simpler.
Trusted.



Supporting you at every step.

3M™ Trizact™ Composite Slurry and Pad Products for Lapping and Finishing

When it comes to ensuring the quality of semiconductor and display wafers, the solutions you use for lapping and finishing are critical in achieving the tightest specifications in the latest generation electronics and chips. 3M™ Trizact™ Composite Slurry and Pad products not only gets you quality products that help at every step of the lapping and finishing process, but the peace of mind that comes with knowing our team of engineers and application experts are ready to help you integrate them into your manufacturing process.

3M™ Trizact™ Composite Slurry and Pad products come in a variety of grades, each suited to a different wafer type (silicon carbide or sapphire) and process step:

TCSP Slurry Portfolio by Process Step

Application	Trizact Grade	Product	Substrate	Removal Rate (RR) (um/min)	Surface Finish (Ra) (nm)	Common Pad Used
Lapping	Medium	Trizact Composite Slurry DT-100	Sapphire Silicon carbide	1.5	15	HT-800-PC
Rough Lapping	Coarse	Trizact Composite Slurry DT-100	Sapphire Silicon carbide	1.8	25	HT-800-PC HT-250
Rough Lapping	Coarse	Trizact Composite Slurry DT-50	Sapphire	1.3	21	HT-800-PC
Pre-CMP	Ultrafine	Trizact Composite Slurry DE-100, 4XS	Silicon carbide	0.2	< 2	HT-315-E

- Medium and coarse grade products are applicable to sapphire and silicon carbide
- Fine and ultrafine grades slurries are used primarily for silicon carbide finishing

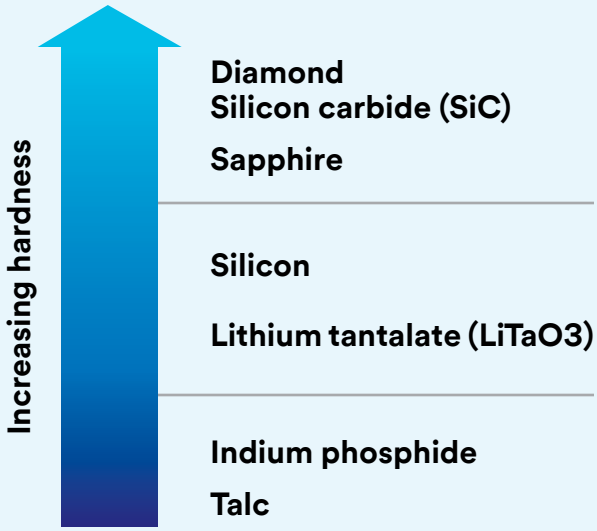
	Trizact Composite Slurry DE-100, 4XS	Trizact Composite Slurry DT-100	Trizact Composite Slurry DT-100
Trizact grade	Ultrafine	Medium	Coarse
Removal rate (RR)	Low	High	High
Finish	Mirror	Medium	Medium
Application	Pre-CMP	“Rough” lap	“Rough” lap

A simpler alternative.

3M™ Trizact™ Composite Slurry and Pad products were developed as an alternative to the copper composite platen and diamond slurry process (Cu DMP). Some of the advantages include:

- No need to re-groove copper platen
- Good Total Thickness Variation (TTV)
- No copper in polishing waste
- High Removal Rate (RR) with good surface finish
- Ease of use

When to use 3M™ Trizact™ Composite Slurry and Pad Products



- Works best on crystalline materials like sapphire, silicon carbide, etc.
- Substrate hardness/brittleness dictates pad and slurry type (e.g. “softer” LiTaO3 substrate works best with HT-315-E pad)
- Different pads and slurry type for the various finishing steps in substrate finishing
- Best results achieved immediately after wire saw; i.e., minimizes number of steps in the finishing process

Got a tough finishing challenge?

3M's global network of Abrasive Technical Service Centers and regional business centers are at your service! Our experienced staff of abrasive specialists can help you determine the optimal combination of high performance abrasives, equipment and process steps for your specific application. For contact information, visit us at **www.3M.com/electronics** and go to the "Abrasives for Electronics Finishing" section.

Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

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