

Wafer polishing: DP, GDP and GPP



Polishing wheels from the EHWA source document

Backside finishing after grinding

EHWA presents polishing tools for finishing silicon wafers after back grinding. The sources use DP for Dry Polishing, GDP for Gettering Dry Polishing Pad and GPP for Gettering Polishing Pad. These names are considered together with the relevant tool design and source; the different names do not establish identical bonds or materials.

Backside finishing considers roughness and the damage remaining after grinding. Gettering-related processes also consider the ability of suitable structures to capture impurities. Component strength and the desired gettering behaviour are therefore considered together.

Match the tool and task

Source designation	Task or feature
DP Wheel	Dry polishing the silicon wafer backside
GPP	Gettering-related polishing pad, used after Z1 and Z2 in the example
GDP	Gettering Dry Polishing Pad designation in supplementary sources
Z3 in the GPP example	Polishing tool following two back grinding stages

Tool construction and process benefits

The DP document shows wool felt with zirconium dioxide and impregnation with resin and ZrO_2 . This construction belongs to the illustrated DP design and is not transferred to every gettering pad. The tool provides a separate finishing stage after the grinding wheels.

Dry polishing operates without a polishing slurry. This process description was checked against a primary machine-manufacturer explanation. EHWA tool selection considers the equipment, mounting, preceding grinding stages and required backside quality. The actual process is defined in conjunction with the selected tool design.

GPP example from the EHWA document

EHWA presents a test with ten 12-inch silicon dummy wafers, AMC APB1-330 tape and a DISCO DGP8761. Z1 and Z2 back grinding are followed by an EHWA GPP as the Z3 tool.

Reported measurement	Source value
Ra, centre	0.92 nm
Ra, middle area	1.05 nm
Ra, edge	1.17 nm
Die-strength chart after Z2	560 MPa
Die-strength chart after GPP	730 MPa

Source: GPP document, PDF pages 1-2, visually checked. The values belong to the illustrated test. The chart does not provide a complete strength-test method, so the figures do not become a general strength or roughness guarantee.

The three roughness positions illustrate why backside finishing is assessed across different areas. A comparison also considers the surface after Z2, the tool sequence and the required gettering behaviour. This connects the final finish to the process that produces it rather than to one isolated roughness figure.

Discuss your wafer finish

Provide the wafer material, diameter, final thickness, machine, tape and existing Z1/Z2/Z3 tools. Add the required roughness, strength target and any gettering requirement. The current process sequence provides a useful starting point for selecting the appropriate finishing tool.

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[Request tool selection](#)

Sources and original documents

- [EHWA: GPP and DP](#) · PDF pages 1-4; GPP test: pages 1-2.
- [EHWA: GDP - Gettering Dry Polishing Pad](#) · PDF page 1.
- [EHWA: DP Wheel - Dry Polishing](#) · PDF pages 1-4.
- [EHWA: GDP, alternative test document](#) · PDF page 1.
- [DISCO: Dry polishing with polishing pads and gettering DP process](#) · general process explanation; no third-party performance figures adopted.