



WaferGrip Temporary Adhesive

WaferGrip is a precision replacement to wax bonding (or Crystal Bond) of parts to various substrates.



Applications

- Wafer Lapping
 - Wafer Polishing
 - Wafer Dicing
 - Any other temporary wafer bonding process
- WaferGrip adhesives consist of Ethylene Vinyl Acetate (EVA) polymers. They are heat activated to bond two surfaces together. A typical application is the bonding of wafers to mounting substrates for the thinning process.
 - WaferGrip is supplied in preformed shapes to suit the required application. This along with the accurately controlled bond line provides an efficient and robust process.
 - WaferGrip is resistant to: water, IPA, acetone, KOH etch solutions developers and some photoresist strippers.

Configurations

WaferGrip is available in three configurations: WaferGrip on release paper, WaferGrip on Mylar and WaferGrip on double sided Mylar. See illustrations below.

Process Method

WaferGrip is removed from the release paper carrier by peeling back the paper from the adhesive.

WaferGrip is then applied at room temperature to a mounting substrate (sapphire, glass etc.).

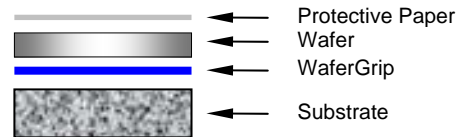
The part or wafer is placed over the WaferGrip. The entire assembly is then heated to around 110°C – 230°F for 30 to 60 seconds. Light pressure is applied to aid the bonding process.

For void free bonding, this process should be performed in a vacuum. Once the part or wafer has been processed it is removed from the mounting substrate with a solvent debond process.

Ask about Dynatex International StripAid solvent. Though application specific, WaferGrip will dissolve partially or completely in hot glycol ether solvents and aliphatic hydrocarbons.

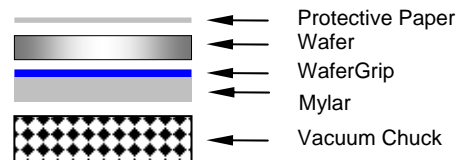
Storage

Store under cool, dry conditions away from direct sunlight. Proper storage temperatures range from -5°C - 23°F to 24°C - 75°F. For best results keep unopened WaferGrip in the original sealed bag with desiccant. Shelf life at 25°C - 77°F and 45% humidity is approximately 1.5 years.



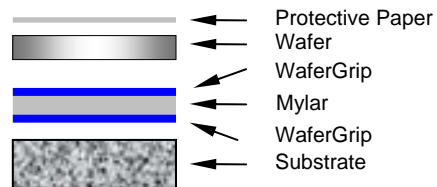
Release Paper Carrier

The adhesive is supplied on silicone coated release paper. This enables the removal of the preform without damage.



Mylar™ Substrate

The Mylar backing serves as a disposable replacement for reusable mounting substrates. The part or wafer is mounted directly on the adhesive side of the Mylar. The assembly is then mounted directly onto a vacuum chuck for processing.



Double Sided Mylar™ Substrate

Double sided Mylar is used in the same manner as WaferGrip on release paper. It is chosen when the substrate needs an additional layer of protection.

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WaferGrip Types

WaferGrip is available in three basic forms: standard, conductive and high temp. Each of these are available in one of two thicknesses. See below for specifications.

Typical Physical Properties

Property	Test Method	Standard WaferGrip	Conductive WaferGrip	High Temp WaferGrip
Melt Point (°C/°F)	ASTM-D-36	98/208	98/208	115/239
Recommended Bond Temperature (°C/°F)	N/A	100-120 212-248	100-120 212-248	120-140 212-284
Lap Shear Strength (psi) (Al to Al)	ASTM-D-1002	400	400	490
Elastic Modulus (psi/KPa)	ASTM-D-3574-E	4600/31716	4600/31716	4550/31371
Ultimate Strength (psi/KPa)	ASTM-D-3574-E	120/827	120/827	517/3565
Ultimate Elongation (%)	ASTM-D-3574-E	9.8	9.8	373
Shore Hardness (A)	ASTM-D-2240	80	80	93
C.T.E -70°C to 49°C (µm/ °C)	ASTM-E-831	133.3	129.0	147.9
Volume Resistivity (ohms-cm)	ASTM-D257	1.6E+14		1.6E+14
% Volatiles	EPA Method 16	Negligible	Negligible	Negligible
Color	N/A	Blue	Purple	Green

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Thickness

WaferGrip is available in the following thickness ranges:

- 1.35 +/- 0.15 mil – 34 µm +/- 4µm
- 2.00 +/- 0.20 mil – 50 µm +/- 5µm

Safety

Dynatex International WaferGrip is a non-hazardous hot melt adhesive. Proper care should be taken to avoid burns. If contact with molten adhesive occurs, rinse with cold water and seek medical care for burns.

Wafer Bonder

Dynatex offers a bonding system that provides a controlled process environment. It controls temperature, vacuum, time and pressure. There are two sizes available: 5 inch - 127 mm diameter bonding chamber and 11 inch - 279 mm diameter bonding chamber. Additional information is available on request.



StripAid

To complete the wafer bonding process, Dynatex International provides the debonding solvent, StripAid. StripAid is a high flash point solvent that can be used at either ambient or elevated temperature. Additional information is available on request.

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