Precision Replacement For Wax Bonding

WaferGrip™

Temporary Adhesive

Suitable For a Wide Variety of Substrates

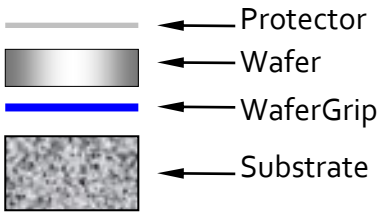
Applications

WaferGrip adhesives consist of Ethylene Vinyl Acetate (EVA) polymers. WaferGrip is heat activated to bond two surfaces together. A typical application is the bonding of wafers to mounting substrates for the thinning process.

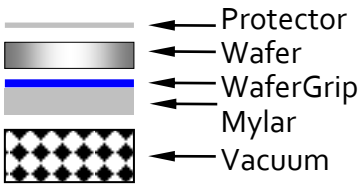
WaferGrip preformed shapes are manufactured to suit the required application. An accurately controlled bond line provides an efficient and robust process. Wafergrip preformed shapes are available in three formulations: Standard, Conductive and High Temp.

Configurations

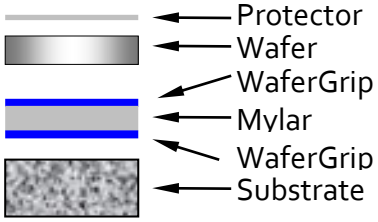
WaferGrip is available in three configurations: WaferGrip on release paper, WaferGrip on Mylar™ and WaferGrip on double sided Mylar (see illustrations below). WaferGrip on release paper is used for many standard applications including wafer dicing and wafer thinning. WaferGrip on Mylar is used as a temporary substrate that allows the user to cut through the wafer into the substrate below. It is typically used in conjunction with a vacuum chuck. Double sided WaferGrip on Mylar is used to bond a wafer to substrate but affords the additional protection of the single sided WaferGrip on Mylar.



Release Paper Carrier



Mylar Substrate



Double Sided Mylar Substrate

WaferGrip Applications

- Wafer Lapping **- Wafer Dicing** **- Wafer Polishing**

- Any Other Temporary Wafer Bonding Process

dynatex™ INTERNATIONAL

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.

Process Method

WaferGrip is removed from the release paper 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 110°C – 230°F for 30 to 60 seconds with light pressure. The use of a vacuum chamber facilitates void free bonding. To remove WaferGrip use Dynatex International's specially formulated solvent StripAid.

Thickness:

WaferGrip is available in the following thickness ranges:

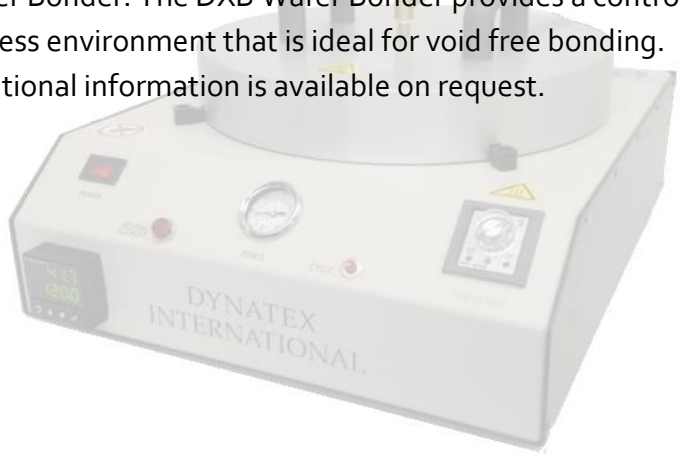
0.8 +/- 0.15 mil – 20 µm +/- 4 µm
1.35 +/- 0.15 mil – 34 µm +/- 4 µm
2.00 +/- 0.20 mil – 50 µm +/- 5 µm

Resistant To:

Water, IPA, acetone, KOH etch solutions developers and some photoresist strippers.

Wafer Bonding System

Dynatex offers a complete bonding system that is comprised of WaferGrip temporary adhesive, StripAid X solvent and the DXB Wafer Bonder. The DXB Wafer Bonder provides a controlled process environment that is ideal for void free bonding. Additional information is available on request.



WaferGrip Properties	Test Method	Standard WaferGrip	Conductive WaferGrip	High Temp WaferGrip
Softening 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	8.8E+13	1.6E+14
% Volatiles	EPA Method 16	Negligible	Negligible	Negligible
Thermal Conductivity (W/mK)	ASTM-D-7984-16	0.243		
Color	N/A	Blue	Purple	Green