



VACUUM BONDING TECHNOLOGY

Vacuum bonding is an advanced bonding system that combines specialty structural adhesives, wear resistant materials and controlled processing. Applications requiring high reliability, impact resistance, and wear protection are ideal candidates for vacuum bonding solutions. Valuable features of vacuum bonded materials are:

- Increased effective impact resistance of hard wear resistant ceramics
- Unparalleled performance in dynamic applications
- Tested high shear strength

Vacuum bonding is an ideal solution in many tough applications such as:

- Fan blades
- Valve gates
- Mixer housings/blades
- Screw conveyors
- Pump volutes

Tensile Shear (Psi, MPa): Fed Standard MMM-A132A	-67°F / -55°C 6770/ 46.7 75°F / 24°C 6840/ 47.2 180°F / 82°C 6770/ 46.7 250°F / 120°C 810/ 5.6
Blister Detection (Psi, MPa): Fed Standard MMM-A132A	-67°F / -55°C 5290/ 36.5 75°F / 24°C 5050/ 34.8 180°F / 82°C 4120/ 28.4 250°F / 120°C 1240/ 8.6
Climbing Drum Metal – to – Metal Peel (in. lbs/in., Nm/m) ASTM D-1781-76	-67°F / -55°C 88/ 36.5 75°F / 24°C 150/ 650 180°F / °C 160/ 690 250°F / 120°C 70/ 310
Floating Roller Peel (lbs./in, KN/m)	-67°F / -55°C 52/ 9.1 75°F / 24°C 79/ 13.8 180°F / °C 110/ 20 250°F / 120°C 59/ 10.4
Wear Materials:	High Density Alumina Ceramic Tungsten Carbide Boron Carbide Sintered Silicon Carbide
Base Materials:	Carbon & Stainless Steel Aluminum Fiberglass
Service Temperature:	200°F / 93°C - Dynamic 250°F / 121°C – Static
Average Lap Sheer Strength:	5240 psi at 70°F/ 36.13 MPa at 21.1°C 3410 psi at 180°F/ 23.53 MPa at 82°C 1620 psi at 250°F/ 11.17 MPa at 120°C
Average Bond Strength: (ASTM D 4541-89)	5540 psi at 70°F / 38.20 MPa at 21.1°C