

Technical Product Overview

AeroTech Bonding

Advanced Bonding Technology

AeroTech is an advanced thermal bonding technology that combines specialty structural adhesives, wear resistant materials and controlled processing. Applications requiring high reliability, impact resistance, and wear protection are ideal candidates for AeroTech bonding solutions. Valuable features of AeroTech Bonded materials include:

- Increased effective impact resistance of hard wear resistant ceramics
- Unparalleled performance in dynamic applications
- Tested high shear strength
- Proven performance in light weight designs
- Economical repair of worn components

AeroTech Solutions

Providing wear protection to industrial equipment requires a comprehensive understanding of materials and applications. With years of experience in providing engineered solutions, we offer proven designs and materials to protect your equipment.



AeroTech Bonding is an ideal solution in many tough applications such as coal fuel piping, pulverizer components, exhauster fans, pumps, screw conveyor and specialty wear parts.



Coal Fired Power Applications

- Exhauster Fan Blades
- Whizzer Disc & Blades
- Spider Arms
- Periphery Liners
- Bullnoses
- Inlet Elbows
- Exhauster Housing
- Riffle Housing

Other Applications

- Valve Gates
- Mixer Housings/ Blades
- Eddy Current Separator Drums
- Mill Paddles
- Cyclones
- Pump Volutes
- Grain Chutes/ Hoppers



REPAREX

“Wear Resistant Coatings & Linings”

P.O. Box 705, Latrobe, PA 15650
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AeroTech Properties

AeroTech Bonding allows design engineers greater freedom to extend the use of advanced wear resistant materials. In weight sensitive applications, AeroTech can be combined with thin ceramic tiles to replace common metals. This can actually reduce a component's weight while improving performance. In many instances, where impact is a concern, AeroTech's shock-absorbing bonding layer allows hard wear materials to be used in extreme stress environments not suitable for traditional installation methods.



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 Shear 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

As an authorized dealer of Saint Gobain Advanced Ceramics, we have access to some of the world's most sophisticated ceramic materials. Durafrax™ 2000 is specified for general applications while silicon and tungsten carbides can be applied in the most aggressive environments.

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°C1240/ 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°C70/ 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°C59/ 10.4



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