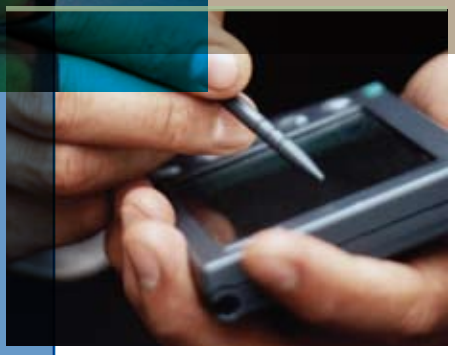
TECHNOLOGY

Adhesive Bonding

OVERVIEW

Adhesive bonding is used to join two, often dissimilar materials. The key to successful adhesive bonding is matching the requirements for joint performance to the mechanical and environmental performance requirements of the assembly. EWI has experience providing customers in the medical, automotive, aerospace, heavy manufacturing and other industries with adhesive bonding technologies to improve production.

EWI provides customers with engineered solutions for adhesive bonding applications.



BENEFITS

Join Different, Non-Weldable Materials

Adhesive bonding can be used to join together very different materials of varying sizes together—including plastics, rubber, ceramics, metals, and glass. Bonds can be temporary or permanent.

Avoid Stress Concentrations and Distribute Loads

An adhesive bond distributes the load on the joint across a larger area of the material, avoiding the stress concentrations of point loads and producing more rigid and reliable structures.

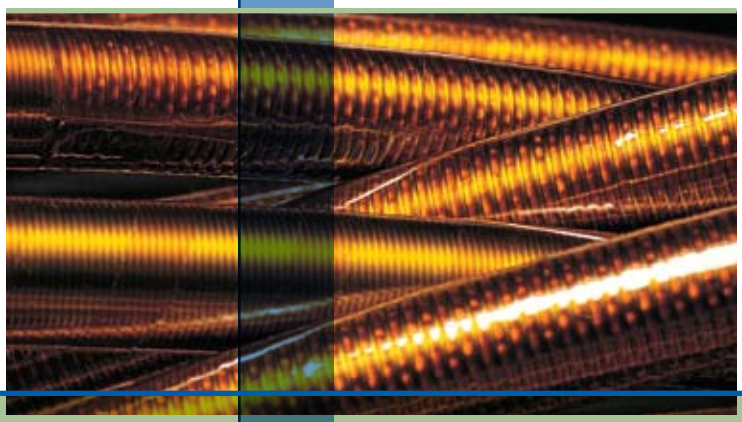
Ensure Better Peel and Fatigue Performance

Adhesives can be combined with welding processes to produce weldbonded structures that have better peel and fatigue performance than adhesives alone, and better strength than welds alone.

EWI's technical strength in welding methods, NDE, and modeling uniquely positions us to research and develop weld bonding applications for adhesives using resistance, laser, ultrasonic, and friction stir welding methods.

The best adhesive can not overcome poor applications development.

EWI's joining expertise allows us to quickly identify existing bonding technologies that can be leveraged across industries and applications. And when one doesn't exist, we work with you to create it.

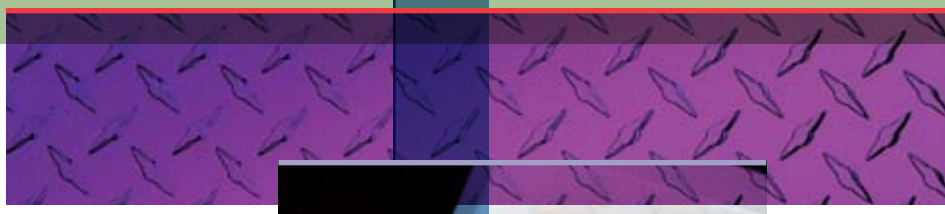


CAPABILITIES

Experienced Adhesive Bonding Team

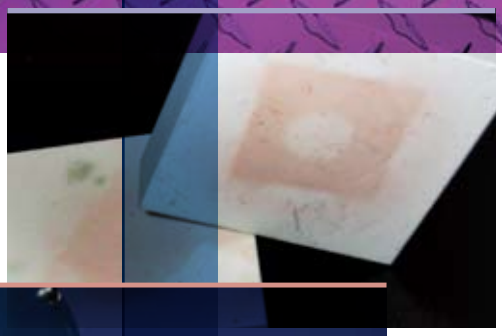
EWI can quickly determine which adhesive bonding technology is correct for your application. We'll lead you through testing and into production as rapidly as possible. If adhesives aren't right for your application, we'll tell you—and then recommend an alternative joining process and guide you through it.

Adhesive bonding can be used to join very different materials—like plastics, rubber, ceramics, metals, and glass.



Readily Available Curing Processes

Adhesive bonding differs from other joining technologies because of the time required for the joint to cure to create the desired strength. To get you into production quickly, EWI has many curing processes readily available for testing, including ultraviolet, thermal, moisture, ultrasonic, microwave, induction, dielectric, and resistive implant curing.



Facilities and Equipment

EWI has the facilities, equipment, and knowledge to handle joint design, mixing, application, curing, storage, disposal and other special considerations involved with adhesives. We also have an unbiased relationship with equipment manufacturers, so you'll get the right equipment and capacity to meet your specific manufacturing requirements.

Training and In-Plant Assessments

We can train your staff in the use and processing of adhesives at your facility or EWI, and tailor courses to meet your organization's specific needs and experience levels. We also offer in-plant assessments to give your team the opportunity to ask questions openly and discuss different approaches.

LEARN MORE

To learn more about EWI's adhesive bonding capabilities, visit www.ewi.org, email info@ewi.org, or call 614.688.5000.

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