

Advanced Structural Adhesives for Bonding
Plastics, Composites, and Metals



PLX

PLEXUS[®]
Structural Adhesives

Revolutionizing Design and Assembly Worldwide

Plexus Adhesives are dramatically changing design and assembly worldwide. They are replacing mechanical fasteners, welding, and other traditional assembly methods in boats, automobiles, trucks, buses, RVs, railcars, spas, tubs, showers, wind turbine blades, and other assembly applications. They are also simplifying the on-site construction of large architectural and civil engineering structures.

Freeing Designers

Freeing designers from the constraints of conventional fasteners, Plexus Adhesives simplify and streamline the design; reduce the weight; and improve the strength, durability, performance, and aesthetics of a wide range of products.

Simplifying and Speeding Assembly

By eliminating predrilling operations for mechanical fasteners and time-consuming surface preparation, Plexus Adhesives simplify and speed production and increase plant throughput by as much as 200%.

Little or No Surface Preparation

Plexus Adhesives require little to no surface preparation, eliminating sanding and grinding, dust, and the need for chlorinated solvents.

Mixed as Dispensed

Plexus Adhesives are mixed as dispensed, eliminating premixing and waste, and simplifying cleanup. They are applied using hand-held dispensers with static mix nozzles or meter-mix equipment. Plexus adhesives can also be easily hand-mixed.

They flow easily, break cleanly at the end of a bead, and have excellent stackability for filling large gaps. Superior sag and swim resistance make them ideal for use on vertical or inverted surfaces. Plexus Adhesives tolerate off-ratio mixing up to 20% without loss of bond strength or physical properties.

Room-Temperature Cure

Plexus Adhesives cure at room temperature, eliminating the need for specialized curing equipment or costly heated fixtures.



Wide Range of Open Times

Plexus Adhesives are available with a wide range of open times to provide rapid curing of smaller parts and accommodate longer working times for larger assemblies.

Superior Bond Strengths and Resistance

Plexus Adhesives produce exceptionally strong bonds with superior flexibility and resistance to impact, cyclic loading, fuels and chemicals, UV, and temperature extremes and cycling.

Approved by Certifying Agencies and OEMs Worldwide

Plexus Adhesives are approved by major certifying agencies worldwide including Lloyds' of London, the Royal Institute of Naval Architects, RINA, Det Norske Veritas, Icelandic, the American Bureau of Shipping, and Underwriters' Laboratories.

They have also been tested and approved for use by major domestic and international builders of automobiles, trucks, buses, and recreational vehicles.

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Bond Plastics and Dissimilar Substrates

Plexus Plastic Bonder™ Adhesives:

- Allow greater design freedom
- Eliminate mechanical fasteners
- Enhance aesthetics
- Produce stronger assemblies by distributing stresses over large bond areas
- Reduce assembly weight
- Speed assembly (cure rapidly at room-temperature)
- Are available in low-odor and low-shrink versions
- Produce stronger bonds than solvent bonding
- Reduce VOC emissions
- Are regrind-compatible



BONDING COMPOSITES

Produce Bonds Stronger Than the Composites Themselves

Plexus Fiberglass Fusion™ Adhesives:

- Chemically cross-link composites at the molecular level, producing bonds so strong that the composites will delaminate before the bonds fail
- Eliminate the need for sanding or grinding
- Offer excellent stackability for filling large gaps and voids
- Demonstrate superior sag and swim resistance on vertical or inverted surfaces
- Are available in long open-time versions for large assemblies
- Are available in low-shrink versions for partially cured ("green") or thin-walled laminates
- Reduce VOC emissions



BONDING METALS

Bond Metals to Metals, Plastics, Composites, and Dissimilar Substrates... *without primers!*

Plexus Metal Bonder™ Adhesives:

- Eliminate bolts, screws, rivets, and other mechanical fasteners
- Eliminate predrilling operations and speed assembly
- Dramatically reduce repetitive stress injuries and factory noise levels
- Eliminate welding and unsightly scorching or dimpling of thin panels
- Are available in long open-time versions for large assemblies
- Exhibit high-temperature resistance for post-bake operations
- Produce stronger assemblies by distributing stresses over large bond areas
- Prevent leaks that can occur when fastener holes expand due to vibration
- Produce smooth, flawless surfaces for improved aesthetics
- Absorb vibration and resist impact, fatigue, and temperature extremes/cycling



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