



PARSON ADHESIVES, INC.

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PARBOND 901 Polyurethane Adhesive

PARBOND 901 is a two-component, very fast setting, room temperature cure polyurethane adhesive system. This sand able adhesive system has an excellent adhesion to wide variety of surfaces.

Feature:

- Fast setting time with convenient 1:1 mix ratio
- Excellent adhesion to wide variety of surfaces such as Aluminum, Stainless steel, ABS, PVC, Polyurethane, Composites, Thermoplastics, Thermosetting Plastics, Wood, Glass, Concrete without any use of primer.

Typical Uncured Properties:

	<u>Part A</u>	<u>Part B</u>	<u>Mixed</u>
Color	Beige	Black	Black
Viscosity @ 25 ^o C Brookfield, cps	30,000	30,000	30,000
Weight per Gallon	11	11	11
Mix Ratio by Volume	1:1		
Mix Ratio by Weight	1:1		
Working Time	40 - 60 seconds		
Fixture Time	1 – 2 Minutes		
Functional Cure	15 – 20 minutes		
Full Cure	24 hours		
Service Temperature	-40 ^o F to 250 ^o F		
Coverage per lb.	94 sq. inch per lb @ ¼"		

Typical Cured Properties:

T-Peel Strength	65 – 75 Pli	ASTM D1876
Tensile Elongation	170%	ASTM D638
Shore Hardness	70D	ASTM D 2240
Dielectric Strength	350	volts/mil ASTM D 149
Cure Shrinkage	0.0020 in./in.	ASTM D 2566
Tear Resistance	450 Pli	ASTM D 624
Tensile Strength	2,850 psi	ASTM D 638



Lap Shear Strength after 7 days at 25 °C:

ABS to ABS	925 psi	Aluminum to Aluminum	2,650 psi
Steel to Steel	1975 psi	Concrete to Concrete	1945 psi
Glass to Glass	4050 psi	GBS to GBS	2550 psi
SMC to SMC	1280 psi	Galvanized Metal to Metal	2850 psi

Off Ratio Performance

PARBOND polyurethane adhesives are designed such a way that off ratio does not affect the final properties of the bond performance. Following table shows the result of the off ratio:

Ratio	Fixture Time	Hardness	Lap Shear Strength
0.8:1	2 - 3 minutes	70D	2,575 psi
1:1	1 - 2 minutes	70D	2,650 psi
1.2:1	1 - 2 minutes	70D	2,685 psi

Aluminum / Aluminum According to ASTM D 1002

Result

The above data shows that there is minor change in the lap shear strength and curing properties of the adhesive when mixed off ratio.

Environmental Resistance

PARBOND 901 have excellent resistance to harsh environment conditions. The testing data is as follows:

Condition	Lap Shear Strength & Mode of Failure
Initial	2, 650 psi – Cohesive Failure
Environmental Cycle – 30 days	2, 725 psi – Cohesive Failure

Lap Shear Strength ASTM D 1002 – Aluminum / Aluminum

Environmental Cycle = 8 hours @ -30 °C, 8 hours @ 85 °C, 8 hours @ 30 °C @ 100% Relative Humidity

Result

The lap shear strength has increased after environmental cycle. PARBOND 901 perform better under these conditions compare to the substrates bonded. Substrates may have less resistance to these conditions compare to adhesive.



Surface Preparation:

Clean surface by solvent-wiping any deposits of heavy grease, oil, dirt, or other contaminants. Surface can also be cleaned with industrial cleaning equipment such as vapor phase degreasers or hot aqueous baths. If working with metal, abrade or roughen the surface to significantly increase the microscopic bond area and increase the bond strength.

Mixing Procedure:

Proper homogenous mixing of resin and hardener is essential for the curing and development of stated strengths.

1. Attach cartridge to 50ml or 400ml manual or pneumatic dispensing systems.
2. Open tip.
3. Burp cartridge by squeezing out some material until both sides are uniform (ensures no air bubbles are present during mixing).
4. Attach mix nozzle to end of cartridge.
5. Apply to surface and attach other substrate quickly, as you have 2 minutes of working time to use the product. Substrates can be clamped with a bond line thickness as small as 0.007".

Storage: Store in cool, dry place.

Packaging:

Available in 50 ml and 400 ml dispensing cartridge system. Bulk packing in 5 gallon and 55-gallon drum.

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the product.

Warranty: All products purchased from or supplied by Parson are subject to terms and conditions set out in the contract. Parson warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Parson is consider accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Parson makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will nor infringe any patent.