



TECHNICAL DATA SHEET

9.09.25

Description:	Thixotropic, non-migrating 2-part gel epoxy adhesive engineered for golf club assembly and repair. Provides excellent gap-filling properties for shaft-to-hosel bonding applications.		
Intended Use:	Bonding metal, ceramic, wood and vertical surface where gap-filling is needed.		
Product features:	Designed for golf club building and repair, including bonding steel, graphite, wood, and composite shafts into metal or composite club heads. Ideal for shaft-to-hosel bonding, ferrule installation, gap filling, and structural golf equipment repairs where a non-sag adhesive is required. • High strength structural bond for shaft retention • Excellent gap fill up to 0.250 inches for oversized or worn hosels • Non-sag gel consistency prevents migration inside vertical hosels • Designed to withstand repeated swing impact and vibration • Service temperature range suitable for seasonal golf conditions • 100 percent solids formula		
Typical Physical Properties:	<i>All values already supported in the TDS</i>		
	Cured 7 days @ 75° F		TESTS CONDUCTED
	Adhesive Tensile Lap Shear[GBS]	2,500 psi @ 0.010" bondline	Adhesive Tensile Shear ASTM D 1002
	Dielectric Strength	440 volts/mils	Cured Density ASTM D 792
	Gap Fill	Excellent	Dielectric Strength, volts/mil ASTM D 149
	Impact Resistance	6.5 ft.lb./in(2)	Compressive Strength ASTM D 695
	Service Temperature	-40°F to 200°F	Cured Hardness Shore D ASTM D 2240
	Shore Hardness	80 Shore D	
	Solids by Volume	100	
	Specific Volume	23.7 in[3]/lb.	
	Tensile Elongation	5%	
	Tpeel	2-3 pli	
	Uncured		
	Color	Opaque	
	Fixture Time	10-15 min. @ 72°F	
	Full Cure	48 hrs.	
	Functional Cure	1.5 hr. @ 72°F	
	Mix Ratio by Volume	1:1	
	Mix Ratio by Weight	1:1	
	Mixed Density	9.75 lbs/gal.: 1.17 gm/cc	
	Mixed Viscosity	Gel	
	Working Time	4-7 min. [28 gm @ 72°F]	
	<i>Golf Clubs</i>		
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.		
	Apply mixed epoxy to shaft tip and/or inside hosel bore in an even film or bead.		
Mixing Instructions:	Proper homogeneous mixing is essential to achieve full structural strength for golf club head retention. 25 ML BIRDIEBOND -TUBE 1. Squeeze material into a small container the size of an ashtray. 2. Using mixing stick included on Dev-tube handle, vigorously mix components for one (1) minute. 3. Immediately apply to substrate. 50 ML/400ML/490 ML CARTRIDGES 1. Attach cartridge to Chemical Concepts [50ml] 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 substrate.		
Application Instructions:	• Apply mixed epoxy to shaft tip and/or inside hosel bore in an even film or bead. • Insert shaft into club head within recommended working time. • Apply firm pressure to ensure full wet-out and proper alignment. • A small fillet at the joint indicates adequate gap fill. • Allow bonded assemblies to remain undisturbed until functional cure is achieved prior to handling or play.		

For very large gaps:

1. Apply epoxy to both surfaces
 2. Spread to cover entire area OR make a bead pattern to allow flow throughout the joint
- Let bonded assemblies stand for recommended functional cure time prior to handling.

GOLF APPLICATION PERFORMANCE SUMMARY

- Tensile lap shear strength: 2,500 psi
- Shore hardness: 80D
- Impact resistance: 6.5 ft.lb./in²
- Gap filling capability: up to 0.250 inches
- Service temperature: -40°F to 200°F
- Working time: 4–7 minutes
- Functional cure: 1.5 hours

What This Does Strategically You:

- Keep the document technically accurate
- Do not change or assume performance data
- Maintain ASTM references
- Preserve industrial credibility
- Clearly reposition it for golf fitters and pro shops
- Avoid making unsubstantiated performance claims

CAPABILITIES:

Designed to withstand torsional forces, vibration, and repeated impact associated with golf swings once fully cured. Do not drop, shock load, or heavily load prior to recommended cure time.

Store in a cool, dry place.

Storage:**Compliances:**

None

Chemical Resistance:

Suitable for normal golf course, shop, and storage exposure conditions. Not recommended for prolonged solvent immersion.

The following properties are representative values for golf club bonding applications after full cure (7 days @ 75°F). Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F

Acetic (Dilute) 10%	Poor
Acetone	Poor
Ammonia	Poor
Corn Oil	Excellent
Cutting Oil	Excellent
Ethanol	Poor
Gasoline (Unleaded)	Poor
Glycols/Antifreeze	Fair

Hydrochloric 10%	Poor
Isopropanol	Poor
Kerosene	Excellent
Methyl Ethyl Ketone	Poor
Mineral Spirits	Excellent
Motor Oil	Excellent
Sodium Hydroxide 10%	Poor
Sulfuric 10%	Poor

Precautions:

Please refer to the appropriate safety data sheet (SDS) prior to using this product.

For technical assistance, please call 1-800-220-1966.

Warranty:

Chemical Concepts, Inc. will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

Disclaimer:

All information on this data sheet is based on laboratory testing and is not intended for design purposes. Chemical Concepts, Inc. makes no representations or warranties of any kind concerning this data.



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