

Attributes of Woodworking Adhesives

Attribute	Type of Adhesive							
	Polyvinyl Acetate (PVA) Type III	Polyvinyl Acetate (PVA) Type 1	Hide Glue	Polyurethane	Epoxy	Urea Formaldehyde	Cyanoacrylate (CA)	Contact Cement
Common Names	White/Yellow Glue, Carpenter's Glue, Tightbond	Waterproof White/Yellow/Carpenter's Glue, Tightbond III	Liquid Hide Glue (Old Brown Glue), Dried Hide Glue	Gorilla Glue, PL Turbo, Excel	2-Part Epoxy, Slow Cure Epoxy	Unibond 800	Super Glue, Crazy Glue	
Shelf Life	1-4 years, yellow shorter than white	1-4 years, yellow shorter than white	1 year (liquid), Indefinite (dried)	1 Year	2 Years (hardner), 3 years (resin)	Up to 1 year	1 year, longer if cooled	1 year
Pot Life	N/A	N/A	N/A	N/A	4-50 minutes	Several hours	N/A	N/A
Open Time	5-10 Minutes (white = more initial slip, yellow = more initial grip)	> 10 Minutes (white = more initial slip, yellow = more initial grip)	10 minutes (liquid), Temperature dependent (Dried)	15-20 Minutes	5-30 minutes	5-30 minutes	< 1 minute	assembly, Dry time: 10-20 Min. (water based), 2-15 Min. (Solvent)
Clamp Time	30-60 Minutes	30-60 Minutes	Up to 12 hours (liquid), Less (dried)	4-6 Hours	Not required	5-13 hours	< 1 minute	N/A, presure rolled
Full Cure Time	24 hours	24 hours		6-8 hours	45 minutes to 15 hours			
Strength	Excellent (95)	Excellent (100)	Very Good (76-79)	Good (58)	Excellent (99)	Excellent	Very Strong	High sheer resistance in wide-spread layer
Creap Resistance	Little to Medium	Little to Medium	Excellent	Good	Excellent	Excellent	Very Good	None to Little
Cured State	Soft & Pliable	Soft & Pliable	Very hard, Machines well	Rigid	Hard but workable	Very hard, Rigid	Hard to Very Hard	Soft &Elastic, No rigidity
Gap Filling	None, but can add sawdust	None, but can add sawdust	Poor	Fills small to medium gaps with non-structural foam	Excellent structural filling	Moderate (2-part)	Some structural filling (thicker glues), wicks into joints (thinner glues)	Some with very little strength
Cleanup	Water	Water	Water	Soap and Water, Acetone, Denatured Alcohol	Laquer Thinner, acetone, denatured alcohol	Water	Acetone	Water for water based, solvent for solvent based
Excess Removal	Scrape, chisel, machine	Scrape, chisel, machine	Peel off rubbery, hot water & heat once set	Easily scraped off	Scrape, machine	Scrape, machine	Scrape, machine	Solvent or machine
Cost	\$7/16 oz. (\$.44/oz)	\$10/16 oz. (\$.63/oz)	\$10/lb dried, \$9/10 oz. Liquid (\$.90/oz)	\$13/16 oz. (.81/oz)	\$19/16 oz. (\$1.19/oz)	\$6/1 lb. dried, \$30/1 gal. liquid (\$.23/oz)	\$10/2 oz. (\$5/oz)	\$20/32 oz. (\$.63/oz)
Water Resistance	Low to Medium	High	Low	High to Excellent	Impervious	Excellent	Good	Poor to Fair
Heat Resistance	Low (Looses 50% strength at 150 degrees)	Low (Looses 50% strength at 150 degrees)	Low	Excellent (up to 360 Degrees)	Fair (Stable under 150 degrees)	Good (unaffected to 180 degrees)	Fair (softens at 200 degrees)	Low
Solvent Resistance	Good	Good	Excellent	High	Softens with long exposure to alcohol, acetone, lacquer thinner	Excellent	Softens with acetone exposure	Poor
Best Uses	General furniture making & woodworking, Cabinets, when need to accommodate seasonal wood movement, indoors only	General furniture making & woodworking, Cabinets, when need to accommodate seasonal wood movement, indoors or outdoors, Complex assemblies (open time needed)	When reversability needed, Musical Instruments, Period Furniture, Veneering, bonding natural materials	Outdoors, Complex assemblies (open time needed), Laminations, Bonding Hardware, foam, stone, concrete, ceramics, finished components	Outdoors, Complex Assemblies (open time needed), Bonding Hardware, Structural gap filling	Veneering, bent laminations	Quick repairs of small pieces (rapid bonding), Temporary glue blocks for clamping	Plastic laminates to substrate, rigid sheet materials

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