

# SPRUCE SPARS – CAPSTRIP – STRINGERS

## GENERAL ORDERING INFORMATION

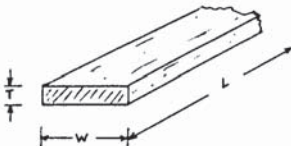
Aircraft spruce spars are available either S2S (surfaced 2 sides, top & bottom, with rough edges in 4" & 6" nominal width) or S4S (surfaced all 4 sides to thickness & width). Prices in table below are for S4S spars. If S2S is desired so builder can trim to exact width, specify S2S and use 4" or 6" width prices from table. Request quote on spar widths wider than 6". Spars for certificated aircraft such as Aeronca, Stearman, Taylorcraft and Piper are available and may be priced from the table. Since many of these early aircraft were "handmade", the spars are often not uniform in size for a particular model. Therefore, the finished net dimensions should be specified when ordering replacement spars. Please price to nearest fraction.

Thousands of feet of S2S aircraft quality spruce are stocked in our Corona, CA. warehouse. Orders for spars, spruce kits and capstrip can usually be shipped within three weeks after receipt of order. Spars wider than 6" must be milled from 8" specially selected stock which requires a long and indefinite lead time. Prices on request.

For additional technical information refer to a complete reprint of spruce specification MIL-S-6073 and plywood specification MIL-P-6070.  
P/N 13-14900 .....

When ordering either spars or capstrip, designate the thickness first, then the width and length.

Examples: 3/4" T x 4-1/4" W x 14' L spar; 1/4" T x 1/2" W x 5' L capstrip.



Faster delivery can be assured if guidelines regarding minimum acceptable lengths are provided. Orders are often delayed awaiting delivery of lumber to the even footage specified whereas shipment could be made if the minimum usable lengths were indicated. Example: 3/4" nominal 6" x 12' (131-1/2" min.).

Spruce and tubing kits may be combined with plywood and other building supplies for a single truck delivery charge.

### NOTICE

We supply only certified aircraft grade spruce spars which meet Mil-S-6073. Do not accept lower grades of spruce for lower prices in your project. It is no bargain. Demand top quality. Capstrip may be cut from "C and better" graded spruce as it is non-structural.

**No Packaging Charges On Spruce**



### BARGAIN BAG OF SPRUCE

Assortment of at least ten pieces, in random lengths from 1 ft. to 5 ft., of rough, S2S or S4S remnants and cutoffs. A usable selection is assured. Approx. wt. 20 lbs.

P/N 02-03600 ..... **Now Only .**

## SPRUCE SPAR STOCK – MIL SPEC. MIL-S-6073

PRICE PER LINEAL FOOT\*

THICKNESS (Inches)	WIDTH (Inches)														
	2-3/4	3	3-1/4	3-1/2	3-3/4	4	4-1/4	4-1/2	4-3/4	5	5-1/4	5-1/2	5-3/4	6	
1/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
3/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
5/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
3/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
5/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
11/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
3/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
13/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
7/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
15/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1-1/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1-1/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
1-1/2	.	.	---	.	.	.	---	---	---	.	---	---	---	.	

\* Prices shown are for lengths less than 12 feet. Add 15% per foot for lengths longer than 12 feet. Please order by part number and also state exact thickness, width and length to verify part number. Spruce part numbers begin with "02" and finish with thickness and width. Examples: 3/4" T x 5-1/4" W is P/N 02-34514; 1-1/4" T x 6" W is P/N 02-1146. Provide part number and footage required of each size. Specify any particular lengths required. Thicker & wider sizes subject to availability. Request quotation.

## FINISHED CAPSTRIP, LONGERONS, STRINGERS

PRICE PER LINEAL FOOT\*

THICKNESS (Inches)	WIDTH (Inches)															
	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	1-3/4	2	2-1/4	2-1/2
1/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5/16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1/2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3/4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7/8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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\* Prices shown are for lengths less than 7 feet. Add 20% for lengths 7-10 feet and 35% for lengths over 10 feet. Please order by part number and also state exact thickness and width. Begin part number with "02", then thickness & width. Example: 1/4" T x 3/8" W is P/N 02-1438. Capstrip is furnished in lengths as specified by customer.

WP

# SPRUCE KITS FOR HOMEBUILTS

WP



## AIRCRAFT SPRUCE'S FIRST HOMEBUILT

This Smith Mini Plane N1G was started in mid 1961 and was first flown on November 12, 1967 at Chino, California. It was built by Norm Ginn who operated a small company named Aircraft Spruce Co. selling spruce lumber in the early 1960's. In 1965, Norm sold the company name to Flo and Bob Irwin who began to build the business into what is today Aircraft Spruce & Specialty Company. Thus, N1G is the first homebuilt using materials from "Aircraft Spruce". Norm sold N1G in 1970, and today it is with its seventh owner in Texas. Norm Ginn retired and lived in Albuquerque, New Mexico. He enjoyed spending time with his sons and grandsons building and flying radio-controlled aircraft. Norm passed away on April 22, 2007, but he and his son Bob had started a new business offering engraved photos of aircraft on marble. See their website at [www.lasercraftstudios.com](http://www.lasercraftstudios.com).

## AIRCRAFT SPRUCE & SPECIALTY CO.

**THE #1 SOURCE FOR SPRUCE SPARS & CAPSTRIP SINCE 1965. LOOK TO THE LEADER!**

### SPRUCE KITS

Our spruce kits are designed to encourage the builder to personally produce the components for his aircraft with a minimum of investment in shop equipment. A table saw is an asset, but an aircraft can be built completely with the use of only hand tools.

The complete kits listed below contain all the spruce required for the aircraft. Kits marked \*\* contain the wing and aileron spars finished to the net dimensions called out in the plans, without beveling. In all other kits the wing and aileron spars are S2S (surfaced two sides) spar stock that is to be cut to the finished pieces. The rib and stringer stock are supplied S2S to the net thickness required and are to be run through a table saw one way to produce the finished pieces. One board 1/4" thick x nominal 6" wide will yield about 16 pieces of finished 1/4 x 1/4 capstrip.

Without the use of a table saw, the builder should order only a Spar Kit, which includes the wing and aileron spars finished to net dimensions (unbeveled), then order the capstrip and milled stock as needed.

No plywood, glue, nails or other supplies are included in our spruce kits. All materials must be ordered individually as priced in this catalog.

Spruce kits are well packed, shipped by truck and insured for value by the carrier. Export orders are solicited. Prompt and efficient handling is assured.

Since all spruce is milled to individual requirements and cannot be stocked in finished condition, payment in full is requested with order.

**NOTE: Our spruce kits are produced from materials lists which are believed to be accurate. However, since designers may modify certain dimensions after the original plans are released, we urge the builder to verify sizes and current price before ordering.**

**WE CHARGE NO PACKING CHARGES ON SPRUCE**

### COMPLETE SPRUCE KITS

Acro Sport .....	02-03700 .....
Acro Sport II .....	02-03800 .....
Baby Great Lakes.....	02-03900 .....
Bobcat .....	02-25100 .....
Christavia MK 1 .....	01-39880 .....
Christavia MK 4 .....	01-39910 .....
Corby Starlet CJ-1 (less spars).....	02-04300 .....
Cvjetkovic CA-65.....	02-04400 .....
Cygnat .....	02-04500 .....
EAA Bi-Plane.....	02-04600 .....
Fly Baby Spruce Kit.....	01-00977 .....
GN-1 Aircamper **.....	02-04700 .....
GP-4 .....	02-25200 .....
Hatz Bi-Plane .....	02-04800 .....
Kelly-D.....	02-04900 .....
Mitchell B-10.....	02-05000 .....
<b>One Design .....</b>	<b>See Page 19 for Kits</b>
Osprey II ** .....	02-05100 .....
Pietenpol Aircamper .....	02-02500 .....
Pitts Special (Basic) M-6 or S-1D .....	02-05200 .....
Pober Pixie .....	02-05300 .....
Rand KR-1 ** .....	02-05400 .....
Rand KR-2 ** .....	02-05500 .....
Rand KR-2S .....	02-05510 .....
Rutan VariViggen .....	02-05600 .....
Skybolt.....	02-05700 .....
Smith Miniplane.....	02-05800 .....
VP-1.....	01-00222 .....
VP-2.....	02-08800 .....
Volmer Sportsman VJ-22 (less wings).....	02-06000 .....
War Aircraft Corsair.....	02-06100 .....
War Aircraft P-47.....	02-06200 .....
War Aircraft FW-190.....	02-06300 .....
War Aircraft Sea Fury.....	02-06400 .....
Wittman Tailwind** .....	02-06500 .....

\*\* Wing & aileron spars finished to net dimensions. Not beveled.

### SPAR KITS

Acro Sport .....	02-06600 .....
Acro Sport II .....	02-03810 .....
Baby Great Lakes.....	02-06700 .....
Bakeng Duce.....	02-06800 .....
Barracuda .....	02-06900 .....
Bowers Fly Baby (Spars) .....	02-07000 .....
Bowers Complete Wing Kit .....	02-07100 .....
Christavia MK 1 .....	01-39880 .....
Christavia MK 4.....	01-39980 .....
Corby Starlet (Two Piece Wing Spar Kit).....	02-09000 .....
Cvjetkovic CA-65.....	02-07300 .....
EAA Bi-Plane .....	02-07400 .....
Hatz Bi-Plane .....	02-07500 .....
Kelly-D.....	02-07600 .....
Marquart Charger.....	02-07700 .....
Pitts Special M-6 or S-1D.....	02-07800 .....
<b>One Design .....</b>	<b>See Page 19 for Kits</b>
Sauser P6E .....	02-02000 .....
Skybolt.....	02-07900 .....
Smith Miniplane.....	02-08000 .....
Stolp Starduster Single Place .....	02-08200 .....
Starduster "Too" .....	02-08300 .....
Starlet .....	02-08400 .....
Wittman Tailwind .....	02-08500 .....
Wittman "V" .....	02-08600 .....

**SPRUCE KITS FOR UNLISTED DESIGNS CAN BE FURNISHED IF A MATERIALS LIST IS SUBMITTED.**

### TYPICAL WEIGHTS OF SPRUCE KITS

EAA Bi-Plane Complete Kit .....	<b>99 Lbs.</b>
Pitts Special Complete Kit .....	<b>73 Lbs.</b>
Pitts Special Spar Kit Only .....	<b>35 Lbs.</b>
Miniplane Complete Kit .....	<b>49 Lbs.</b>
Fly Baby Complete Kit .....	<b>132 Lbs.</b>
KR-1 Complete Kit .....	<b>61 Lbs.</b>

# PLYWOOD

## DOMESTIC MIL-P-6070 AIRCRAFT PLYWOOD



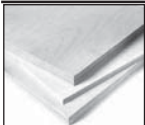
American-made structural aircraft-grade plywood is made of imported African Mahogany or American Birch veneers laminated in a hot press to hardwood cores of Poplar or Bass wood with waterproof glue. Will meet all requirements of specification MIL-P-6070, which calls for shear testing after immersion in boiling water for 3 hours. Far superior to many plywoods in which all plies are 1/16" thick and laminated in a cold press to make up the total thickness. Tests should be made on cold-press plywoods before use in aerobatic aircraft.

**WP**

Thickness			90° Mahogany				90° Birch			
In.	Approx. MM.	No. of Plies	Approx. Wt. 4' x 8' Sheet	Part No.**	Price Per Sq. Ft.	4' x 8' Sheet	Approx. Wt. 4' x 8' Sheet	Part No.**	Price Per Sq. Ft.	4' x 8' Sheet
1/16 (.070)	1.5	3	6 Lbs.	02-189--	<b>\$3.29</b>	.	7 Lbs.	02-243--	<b>\$3.04</b>	.
3/32 (.100)	2.5	3	10 Lbs.	02-191--	<b>3.90</b>	.	12 Lbs.	02-244--	<b>2.77</b>	.
1/8 (.125)	3.2	3	12 Lbs.	02-193--	<b>4.00</b>	.	15 Lbs.	02-245--	<b>2.82</b>	.
3/16 (.190)	4.8	3-5	20 Lbs.	02-195--	<b>6.15</b>	.	24 Lbs.	02-246--	<b>6.12</b>	.
1/4 (.250)	6.4	5	25 Lbs.	02-197--	<b>6.99</b>	.	30 Lbs.	02-247--	<b>7.46</b>	.
5/16 (.312)	7.9	5	Lbs.	02-198--	<b>7.51</b>	.	30 Lbs.	02-251--	<b>8.05</b>	.
3/8 (.375)	9.5	5	Lbs.	02-199--	<b>7.80</b>	.	30 Lbs.	02-266--	<b>8.30</b>	.
7/16 (.437)	11.1	7	Lbs.	02-120--	<b>8.95</b>	.	30 Lbs.	02-267--	<b>9.56</b>	.
1/2 (.500)	12.7	7	Lbs.	02-121--	<b>9.27</b>	.	30 Lbs.	02-260--	<b>9.74</b>	.
			45° Mahogany				45° Birch			
1/16 (.070)	1.5	3	6 Lbs.	02-188--	<b>5.74</b>	.	7 Lbs.	02-248--	<b>5.31</b>	.
3/32 (.100)	2.5	3	10 Lbs.	02-190--	<b>6.09</b>	.	12 Lbs.	02-249--	<b>4.74</b>	.
1/8 (.125)	3.2	3	12 Lbs.	02-192--	<b>6.65</b>	.	15 Lbs.	02-250--	<b>5.19</b>	.

\*Domestic plywood is sold only in 2'x4' (8 Sq.Ft.), 4'x4' (16 Sq.Ft.), 2'x8' (16 Sq.Ft.), and full 4' x 8' sheets. If ordering less than full sheet, compute cost based on price/sq.ft. shown in above table.

\*\* The part numbers of full 4' x 8' sheets end with "80". For less than full sheets, the last two digits will change according to the size ordered. Change the last two digits in the part number to "10" for 4' x 4', "20" for 2' x 8' and "30" for 2' x 4'. Example: 1/16" mahogany 90° is 02-18980 (4' x 8'), 02-18910 (4' x 4'), 02-18920 (2' x 8') and 02-18930 (2' x 4').



### FINNISH BIRCH AIRCRAFT PLYWOOD (METRIC)

Quality Birch aircraft grade plywood AB/B grade.

Thickness		Plies	Half Sheet 2'x4'		Full Sheet 4'x4'	
Nom. Inch.	mm		Part No.	Price	Part No.	Price
1/64	0.4	3	02-20250	.	02-20200	.
1/32	0.8	3	02-20350	.	02-20300	.
3/64	1.0	3	02-50050	.	02-50000	.
1/16	1.5	3	02-20450	.	02-20400	.
3/32	2.5	5	02-20550	.	02-20500	.
1/8	3	5	02-20650	.	02-20600	.
3/16	5	10	02-20750	.	02-20700	.
1/4	6	12	02-20850	.	02-20800	.

Corby Starlet 2MM x 48" x 48"..... P/N 02-28050  
 1/4 Birch/Poplar 5ply, 45"..... P/N 02-27180



### OKOUME PLYWOOD

Okoume (o-KUE-me), also referred to as Gaboon, is an African hardwood widely used in Europe over the past century. Light pinkish brown in color, sometimes lustrous with variable interlocking grain, the rotary cut panel can be painted or finished bright. The natural durability of this species is extremely low and care

must be taken to finish all surfaces, face and edges. Often recommended for use with epoxy saturation systems, the panel exhibits high strength to weight ratios. Face veneers are made from 1.3 mm thick A/B grade rotary cut veneer. Cores and crossbands are solid-joined and the panel glued with waterproof glue. Okoume panels are extensively used by race class boat builders, rowing shell builders and in various applications. Where its lighter weight, good bending properties and ease of finishing are a value, 5/32" thickness is used in the One Design Kit Aircraft and applicable to a wide variety of Homebuilt Aircraft, sold in 4'x8' sheets. Wt. of 5/32" sheet is 8.8 lb. Wt. of 1/4" sheet is 28 lbs. Thickness varies from 5mm to 6mm. Can be cut down for shipping.

5/32" thick x 4' x 8' sheet ..... P/N 02-20100  
 1/4" thick x 4' x 8' sheet ..... P/N 02-00076

### LITE PLY PLYWOOD



The beautiful, pliable answer to shaped and curved construction problems. Lite Ply® is distinguished by its even grain, virtually snow white appearance and unusual resilience. It is a true "white wood," poplar and finishes uniformly, whether stained or painted.

Supplied for over 50 years, Lite Ply® has proven to be an excellent wood for industries where weight is a concern. Lite Ply® has been proven to

be a cost effective alternative to other light weight panels.  
 4' X 8' Sheet 1/8" 3MM..... P/N 02-00115  
 4' X 8' Sheet 1/4" 6MM..... P/N 02-00116



### ROYAL MARINE A-A FIR PLYWOOD

First quality marine plywood that meets or exceeds requirements of specifications PSI-74. All are Douglas Fir. Insist on A-A grade for your aircraft!

**\$4.00 packing charge for less than 3 sheets unless cut to 2'x4' pieces for UPS shipment.**

Thick-ness	No. of Plies	Part No.*	Price			
			2'x2'	2'x4'	4'x4'	4'x8'
1/4"	3	02-210--	.	.	.	.
3/8"	4	02-211--	.	.	.	.
1/2"	5	02-212--	.	.	.	.
5/8"	7	02-213--	.	.	.	.
3/4"	7	02-214--	.	.	.	.
1"	7	02-215--	.	.	.	.

\*Please order by part number, note thickness & size for verification. The part numbers for full 4'x8' sheets end with "80". For less than full sheets, the last 2 digits of the part number, will change according to size ordered. Change last 2 digits of the part no to "20" for 2'x2', "40" for 2'x4' & "60" for 4'x4'. Example: 1/4" 2'x4' is 02-21040.

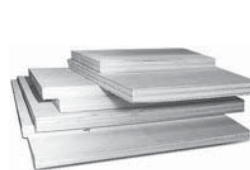


### BASSWOOD MIL-P-6070 AIRCRAFT PLYWOOD

Basswood meets MIL-P-6070 but is lighter and has more flexibility than Mahogany & Birch plywood, but has slightly less structural strength.

Thickness	No. of Plies	Part No.*	Price			
			2'x2'	2'x4'	4'x4'	4'x8'
1/16"	3	02-253--	.	.	.	.
3/32"	3	02-254--	.	.	.	.
1/8"	3	02-255--	.	.	.	.
3/16"	3	02-256--	.	.	.	.
1/4"	5	02-257--	.	.	.	.
3/8"	5	02-261--	.	.	.	.
7/16"	7	02-262--	.	.	.	.
1/2"	7	02-263--	.	.	.	.
5/8"	9	02-265--	.	.	.	.
3/4"	9	02-264--	.	.	.	.

**NOTE: All sheets 4'x8'. All plies are basswood. Grain is 90°. Part nos for full 4'x8' sheets end with "80". For less than full sheets, the last 2 digits will change according to the size ordered. Change the last 2 digits in the part no to "60" for 4'x4', "20" for 2'x2' and "40" for 2'x4'. See example in domestic plywood table.**



### 5/16" 5 PLY BIRCH/ BASSWOOD PLYWOOD

2X2..... P/N 02-27220  
 2X4..... P/N 02-27240  
 4X4..... P/N 02-27260  
 4X8..... P/N 02-27280

# BALSA – NAILS – GLUES

## AIRCRAFT NAILS

Flat, bonderized steel nails, brass plated to prevent rusting and cement coated to improve holding power. Manufactured to Federal Specification FF-N-105 (formerly AN301). Order by part no.



Part No.	Size		Price		
	Length	Gauge	1/4 Lb.	1/2 Lb.	1 Lb.
AN301-20-2	1/4"	20	.	.	.
AN301-20-3	3/8"	20	.	.	.
AN301-20-4	1/2"	20	.	.	.
AN301-20-5	5/8"	20	.	.	.
AN301-20-6	3/4"	20	.	.	.
AN301-20-8	1"	20	.	.	.

There are approximately 9,000 3/8" x 20 steel nails per pound.

## QUIK FIX EPOXY PUTTY STICKS



Quikfix BC 101 is a hand mixable, fast curing, general purpose epoxy putty stick that mixes in just one minute to provide fast repairs to many surfaces including metals, wood, glass, concrete, ceramics and numerous plastics. One hour after mixing, QuikFix BC 101 can be drilled, sawed, sanded, filed, tapped, machined, or painted. It comes in a handy concentric putty stick with the curing agent encapsulated in the contrasting color base material. The putty-like consistency eliminates drips and runs, producing "no mess" applications with no tools required for use. In order to achieve optimum adhesion, surfaces should be clean, dry and free of grease or dirt. Scuffing or sanding the surface prior to cleaning helps insure a good bond. Color: Gray (after cure).

3.5" stick ..... P/N 01-00333 .....  
7" stick ..... P/N 01-00332 .....

## INSTANT GLUES



These American made Instant Glue products were used extensively in construction of the "Around the World Non-stop" Voyager aircraft and are highly recommended for many homebuilt aircraft applications by Voyager Aircraft, Inc. and Rutan Aircraft Factory. They create a fast, permanent bond on many similar and dissimilar materials such as woods, metals and composite materials.

**HOT STUFF™** - Odorless THIN have a consistency resembling that of water, used mainly for bonding parts which fit very well. 2oz

P/N 01-35500 .....

**UFO™** - "UFO" Odorless 'THIN' will not attack foam, making foam bonding possible. Fiberglass skins, right on the foam, are practical and easy with "UFO" Odorless 'THIN'. 2oz. P/N 01-01038 .....

**SUPER 'T'™** - A consistency similar to that of syrup and has the ability to fill small gaps between parts which don't fit perfectly. SUPER 'T'™ cures at a slower rate than HOT STUFF™, (10-25 seconds depending on the material). 2oz. P/N 01-35600 .....

**SPECIAL 'T'™** - Special 'T'™ and new UFO™ Odorless THICK are very thick cyanoacrylates with a consistency resembling cold honey. SPECIAL 'T'™ and UFO™ Odorless THICK have greater gap-filling ability than SUPER 'T'™ and more positioning time after contact of parts. The rate of cure is slow enough, (usually 50-60 seconds depending on the material), to allow precise alignment of parts, after assembly. 2oz. P/N 01-01039 .....

**UFO™ THICK** - Odorless. Those who are sensitive to cyanoacrylate curing fumes will enjoy using the new UFO™ in the place of Special 'T'™. Will not attack foam, making foam bonding possible. NCF HOT or MILD should be used to speed the cure. For foam, use Spray n' Cure™ accelerator. 2oz. P/N 01-01040 .....

**NCF QUICK™** - Used with HOT STUFF, UFO Odorless THIN, SUPER T, and UFO Odorless THICK., and with it you can do almost magical things. NCF Quick works in three ways to make HOT STUFF, SUPER 'T' and SPECIAL 'T' Easier, Faster, Stronger and able to bond some of the most unusual materials you can think of. P/N 01-00689 .....

**NCFM™** - Mild Formula accelerator for use with HOT STUFF™, UFO™ Odorless THIN, SUPER T™, and UFO™ Odorless THICK., and with it you can do almost magical things. NCFM™ MAY MELT SOME EXPANDED FOAM PRODUCTS. 2oz. P/N 01-35700 .....

**NCF™** - An extremely fast acting accelerator for all instant glues. "NCF" does everything NCFM™ will do, in a fraction of the time. "NCF" has an extraordinary on-part life. P/N 01-01041 .....

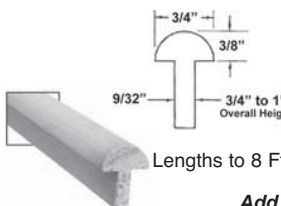
**SPRAY'N CURE™** - FREE of all chlorinated and fluorinated solvents. 2 minute on-part life after the area is completely dry. Special Note: User must allow 50 to 60 seconds (at room temperature) for complete drying before bonding, white foam friendly P/N 01-01042 .....

**SUPER SOLVENT™** - Ultra Solvent™ is a remarkable debonder and cleaner for any instant glue. Use it for hand clean-up, removes instant glue from most clothing and surfaces. Some fabric, colorings or materials may be affected, so test-patch on an inconspicuous place. P/N 01-35800 .....

## BOND-AIDE WOOD EPOXY PUTTY

**BOND-AIDE P-1500** Bond-Aide P-1500W is a wood epoxy putty compound that cures in minutes to form permanent repairs on woods, plaster, ceramics and many plastics with no shrinkage. For woodworking and hobby model use, Bond-Aide P-1500W is unique as it can be shaped to conform to the surface. After 30 minutes, it becomes part of the wood but is many times stronger. Like wood it is light in weight, can be drilled, sawed, nailed, carved, machined, sanded, stained and painted, all within 30 minutes. It is non-toxic and is quickly and safely readied for application without any mess. It will not drip or sag, and unlike conventional wood putties, P-1500W will not dry out, even after opening. Excellent for bonding wood to wood, wood to metal, and wood to glass or ceramics. P-1500W has a multitude of uses in aircraft restoration, rebuilding, and repair.

1 tube 2-part Bond-Aide P-1500W ..... P/N 02-18650 ..... /ea



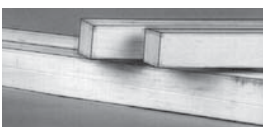
## "T" STRINGER STOCK

Standard Spruce stringer material finished to the dimensions illustrated. Lengths over 8 feet require truck ship-

Lengths to 8 Ft. .... P/N 02-18400 ..... /ft.

Add 20% for lengths over 8 feet.

## BALSA WOOD

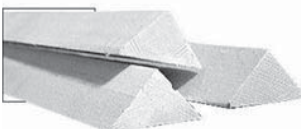


Balsa is the lightest commercial wood in the world, weighing less than 10 lbs./cu.ft. Pound for pound, it is one of the strongest - both its stiffness and bending strength exceed White Spruce, Western Yellow Pine, Douglas Fir, White Oak and many other commercially used woods. It is easily cut, turned, carved, glued, sanded and finished, all with ordinary wood working tools and techniques. It can be shaped with abrasive wheels either wet or dry. It can be cut into extremely thin veneers. Almost any kind of coating will adhere to it. Meets specifications MIL-B-2747 and MIL-S-7998.

Furnished as 2" thick boards, 3 ft. long from 3"-6" wide. Material which may be glued together by the builder to make the required size pieces.

2" x 3" x 3 ft Pc ..... P/N 02-03500 ..... /ea.

ACTUAL SIZES OF BOARDS CAN VARY



## TRIANGULAR CORNER BLOCKING

90° Corner Blocking  
Order by the foot.

Size	Price Part No.	Per Ft.	Size	Part No.	Price
1/4"	02-17600	.	1/2"	02-18000	.
5/16"	02-17700	.	5/8"	02-18100	.
3/8"	02-17800	.	3/4"	02-18200	.
7/16"	02-17900	.	7/8"	02-18300	.



## WING TIP BOWS

Preformed wooden wing tip bows for use in all Piper Aircraft Models J-3 to PA-22. It is recommended to soak the wing tip bows in water before

installation to avoid breakage. P/N 02-18500 ..... /ea.  
**Note:** Wing tip bows can be shipped via UPS with an oversized package rate equal to the 30 Lb. rate.

## AIRCRAFT SPRUCE AND PLYWOOD REFERENCE MANUAL

Reprint of Government Specifications MIL-S-6073 and MIL-P-6070.

P/N 13-14900 .....

## GORILLA GLUE TOUGHEST GLUE ON EARTH



Gorilla Glue is known as the toughest glue on planet Earth. A high strength adhesive that quickly bonds wood, metals, stones, ceramics, and more. Gorilla Glue is a versatile, interior/exterior adhesive ideal for building projects. 8 oz. bottle.

**Benefits:** • 100% Waterproof • Incredibly Strong and Versatile • Stainable and Paintable • Easily Sanded • More Coverage • A Long Open Working Time • Dries Light Tan • Non-toxic • Acid-Free P/N 02-00101 .....

WP

# ADHESIVES - GLUES



## CASCOPHEN

A Resorcinol Formaldehyde Adhesive capable of curing at room temperature and providing strong, durable, waterproof bonds. Comes in two parts, a liquid resin (part A) and a powdered catalyst (part B). The liquid resin is an alcohol-water solution of a partially condensed resorcinol-formaldehyde resin containing a suitable reinforcing cellulosic filler. The hardener is a tan powder formulated from paraformaldehyde and a suitable cellulosic filler. Produces a cured glue line which is resistant to fresh water or salt water, most acids and organic solvents, and lubricating oils and greases. Being thermoset, the bond is resistant to elevated temps. and conversely, no loss in bond strength occurs at temperatures as low as 40°F. These features make it advantageous for use as a general marine and aircraft use. It provides strong bonds between many wood and non-wood surfaces. These include treated woods, many plastics, natural and synthetic rubber, primed metal, leather, textiles, paper and fiber boards.

- Pint Kit (Pint A, 1/4lb B) ..... P/N 02-00036 .....
- Quart Kit (Qt A, 1/2lb B)..... P/N 02-00037 .....
- Gallon Kit (Gal A, 2lbs B)..... P/N 02-00038 .....



## FPL-16A HUGHES GLUE

This is an exceptionally fine two-part white epoxy glue for homebuilt and experimental aircraft. It is based on a formula developed by Forest Products Laboratories. It is excellent not only for wood but for many other applications such as a metal to wood adhesive, metal to metal, just about anything with the exception of some plastics.

It has been used by builders for many years with universal acceptance. Its low viscosity makes it very easy to work. Shelf life: Resin - more than 1 yr. Hardener - Indefinite.

- Qt Kit (1 qt. resin, 4oz hardener, Wt 4 lbs) ..... P/N 02-23400 .....
- Gal Kit (1 gal resin, 16oz hardener, Wt. 13 lbs).... P/N 02-23500 .....



## HYSOL EA-9430 GLUE

This new and improved Hysol glue replaces the old EA-9410-2 glue. EA-9430 has the same characteristics as the EA-9410, but has a 50 minute pot life instead of the 30 minute pot life of the EA-9410 at 77°F. Used extensively in the Strojnik S2A sailplane and many other homebuilts.

- P/N 02-18600 .....



## RESORCINOL GLUE

Resorcinol glue is a waterproof two-part system that meets or exceeds the requirements of MIL-A-46051 (Type I, Grade A), (Type II, Grade C), & MIL-A-22397 (Grade A). It resists outdoor exposure, cold or boiling water, heat, molds, and solvents. Pot life: 3-4 hrs. Mix Ratio: 4 to 1 by weight. Excellent for use on wood structures. 1 pint. P/N 0227 ...../ea



## SCOTCH WELD 3M STRUCTURAL ADHESIVE

Commonly known as "Scotch Weld", this two part epoxy structural adhesive will bond wood, metal, plastics and rubber. It has a

pot life of nearly 2 hours after mixing, and a 1 year shelf life. Forms flexible yet very strong bonds. Color: Gray. 2 oz. kit

- P/N 02-00045 .....

**FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352**



## WEST SYSTEM SIX10 THICKENED EPOXY ADHESIVE

Six10 Adhesive gives you the strength and reliability of a two-part WEST SYSTEM epoxy with the convenience of a single part product. Six10 is dispensed with a standard caulking gun. Non-sagging Six10 bonds tenaciously to wood, metals, fiberglass and concrete. It cures in temperatures as low as 50°F. Working time is 42 minutes at 72°F.

Cures to a solid in 5-6 hours and will take high loads in 24 hours. Cure time is faster at warm temperatures and slower in cool temperatures. The Six10 cartridge holds 190 ml of resin and hardener. To use Six10 Adhesive, replace the retaining nut and plug on the West System Six10 dispensing cartridge with the 600 Static Mixer that comes attached to the cartridge. Dispense mixed 2 part epoxy adhesive using a standard caulking gun. The efficient internal geometry of the 600 Mixer thoroughly blends resin and hardener in a short mixing length for good application control and a minimum of waste. Place high-strength, non-sagging epoxy exactly where it's needed in less time and with no mess. Additional 600 StaticMixers are available in packages of two or twelve.

Part No.	Description	Unit Size	Price
01-01069	Epoxy Adhesive Cartridge	190 ml	.
01-01071	Static Mixers	12 ea	.



## T-88 STRUCTURAL ADHESIVE

T-88 is a non-brittle structural adhesive which gives superior finished results even when used under adverse working conditions. T-88 will cure in temperatures as low as 35°F which makes it an excellent choice for homebuilders living in colder climates. It is recommended by the builders of many types of homebuilt aircraft and is excellent for bonding aluminum, steel or wood. When fully cured, it is not affected by water, oil, gasoline and most other chemicals.

- 1/2 Pt Kit.. P/N 02-00046 ..... Pt. Kit..... P/N 02-00047 .....
- Qt. Kit ..... P/N 02-00048 ..... Gal. Kit.... P/N 02-00049 .....



## T-88 UNIVERSAL CARTRIDGES

With the Universal Cartridge any medium to high quality caulking gun will work just fine. When you evaluate the Universal Cartridge notice that without a mixture tip it is perfect for accurately measuring small batches of adhesive. This is something that is very hard to do in a mixing cup without generating a lot of waste. Of course when the cartridge is used with the mixing tip you get both accurate measuring and thorough mixing making large, continuous gluing jobs much easier with flawless products performance.

- P/N 02-00103 .....



## T-88 SQ TURBO MIXER

T-88 System Three Mixing Nozzle

- P/N 02-00108 .....



## UNIVERSAL CART RATIO CHECK CAP T-88

T-88 System Three cart ratio check cap.

- P/N 02-00109 .....



## REDI-MIX MIXER TUBE

The static mixer tube attaches to the cartridge with a retaining nut which screws on securely to the REDIMIX gun. The mixer tip tapers to 1/8" but may be cut back to about 1/4". Very small quantities of epoxy may be prepared in this manner without any waste or added cost.

- P/N 02-90030 .....

## ALL-PURPOSE STRUCTURAL ADHESIVE



This structural adhesive is a unique two-part epoxy system with superior physical properties. Similar to the popular T-88 system, it permanently bonds or mends wood, metals, plastics, fiberglass and ceramics. Its exceptionally high peel strength makes it ideal for bonding dissimilar surfaces. Like the Safe-T-Poxy system, it is safe to use and has a low irritation potential. Mixing Ratio 1:1, Color: Light amber. Cures overnight, max. strength in 7 days (70°F). Gel Time (70°F): FE7004(Fast) 35min, #9922 (Slow) 2.5 hrs

- 1-Pint Kits..... Slow Cure.....P/N 02-00012 .....
- 1-Quart Kits ..... Fast Cure.....P/N 02-00014 .....
- 2-Quart Kits ..... Slow Cure.....P/N 02-00009 .....

## WELDWOOD GLUE

Weldwood Plastic Resin glue is a powdered, pre-catalyzed water-activated glue designed to provide strong, durable bonds for wood and wood products. Forms a bond stronger than the wood itself. Meets Fed. Spec A-A-3052.. Pot life: 4-5 hrs @ 70°, 2.5hrs @ 80°. Mix Ratio: 5 to 2 by volume. Resistant to fungi, bacteria, oil, gasoline & solvents.



- 1 Lb (6 per case) ..... P/N 0203 .....
- 5 Lb (4 per case) ..... P/N 0204 .....

WP

# ADHESIVES

## PTM&W ES6279 AEROPOXY EPOXY ADHESIVE

Manufactured by PTM & W Industries, Inc. ES6279 is a light grayish-tan two part adhesive that was developed specifically for difficult bonding problems involving similar or dissimilar materials. ES6279 provides excellent adhesion to a wide variety of materials such as aluminum, steel, brass, glass, ceramics, and wood. The mix ratio of 1 to 1 by weight or volume allows easy measuring, and the creamy, smooth viscosity allows easy, uniform application. The cured material has excellent strength as well as good resistance to weak acids, moisture, and weather. ES6279 has been used successfully for many years in a variety of general bonding uses as well as numerous production applications.



Part Number	Description	Wt. (lbs.)	Price
02-30015	1/2 quart part A only	3.0	.
02-30020	1/2 quart part B only	3.0	.
02-30025	ES6279 QUART KIT	6.0	.
02-30030	1/2 gallon part A only	12.0	.
02-30035	1/2 gallon part B only	12.0	.
02-30040	ES6279 GALLON KIT	24.0	.
02-30045	1/2 pail part A only	60.0	.
02-30050	1/2 pail part B only	60.0	.
02-30055	ES6279 PAIL KIT	120.0	.

## PTM&W ES6209 AEROPOXY STRUCTURAL ADHESIVE

ES6209 is a translucent, straw colored two component epoxy adhesive with a thick, liquid consistency. ES6209 is an excellent structural adhesive for use when good flow and surface wetting are required. Though pourable it has a controlled flow viscosity to minimize run-out from the adhesive joint. The 1 to 1 combining ratio by weight or volume makes it easy to measure and mix. The working time of over an hour provides plenty of time to coat and assemble the materials to be bonded. ES6209 has excellent adhesion to composite and metal parts typically used in kitplane construction. It bonds rigid foam, wood, ceramics, fiberglass and most metals with ease. When cured ES6209 provides tough, durable structural joints. Mix Ratio: 1 to 1 by weight or volume; Color: Translucent Amber, Mixed Viscosity: 45,000-55,000cps; Pot Life 4fl. oz. Mass: 60-90 min @ 77°F; Cure Time @ 77°F 18-24 hrs., @ 140°F 2-3 hrs.



Quart Kit.....P/N 01-00295 .....  
Gallon Kit.....P/N 01-00296 .....

## FE6026 A/B EPOXY ADHESIVE (REPLACES HEXCEL 9923)

SLE-3012 A/B is a two part epoxy adhesive which bonds well to dissimilar materials with different thermal expansion coefficients. Part A is a nonflow brownish paste to be mixed with a white part B semi-paste. (Fillers in part B may separate in storage. Remix to uniform consistency before each use.) The mix ratio of FE6026 is 1/1 by volume. The pot life of 100 grams of FE6026 A/B is 35-45 minutes @ 75°F. FE6026 A/B will cure in 3-5 days @ 75°F, or 2-3 hours @ 150°F.



Pint Kit.....P/N 02-00043 .....

## PTM&W ES6228 METAL BONDING ADHESIVE

ES6228 is a thin paste viscosity epoxy adhesive designed to provide good bonds to metal surfaces. A unique feature of ES6228 is its ability to bond to slightly oily metal surfaces. This is useful in situations where the complete removal of residual mill oil on metal surfaces is not possible. The thin paste consistency of ES6228 wets the metal surface well, for good adhesion. This viscosity also provides some gap filling capabilities, so "close-fitting" joints are adequate, and matched-metal joints are not required. ES6228 has a 1:1 mix ratio, by weight or volume, for easy measuring. The white resin



and black hardener combine to a smooth gray system that is easy to mix and apply. The cured material has very good properties, with high bond strength and elongation, for tough durable assemblies.

Product Specifications	ES6228-A Resin	ES6228-B Hardener	Test Method
Color	White	Black	Visual
Viscosity,cps	Thin Paste	Thin Paste	ASTM D2393
Specific Gravity	1.32	1.30	ASTM D1475
Density Lb./cu.in.	.0477	.0470	ASTM D792
Mix ratio	100:100 by weight or volume		PTM & W

Quart Kit (4.5 lbs).....P/N 01-00415.....  
Gallon Kit (18 lbs).....P/N 01-00414.....

## SYSTEM THREE ROTFIX

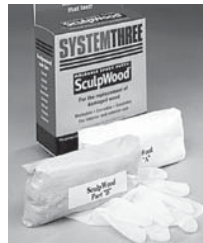
Rotfix is an easy-to-use, low viscosity epoxy wood restoration system for consolidation of rotted, deteriorated, dried out, or spongy wood. It creates a strong water-resistant base for repair and restoration. Penetrates deep into wood for maximum strength. Use with Sculptwood for permanent structural repair or severely damaged wood. Kit includes 16 oz measuring/application bottle.



1.5 pint (24 oz) Kit .....P/N 02-90050...../ea

## SYSTEM THREE SCULPWOOD

Sculpwood is a moldable, carvable, sandable epoxy putty for replacement of damaged wood. It forms a strong, permanent bond to most rigid surfaces and can be sawed, nailed, carved, machined, sanded, stained, painted, and screwed. Porous, rotted, or deteriorate wood should first be treated with RotFix.



2 pint (32 oz) Kit.....P/N 02-90055...../ea

## SYSTEM THREE QUICK CURE EPOXY

Quick Cure is a 5 min. epoxy from System Three which bonds wood, metals, fiberglass, ceramics, plastics and glass. Excellent for making quick repairs, as it hardens in 5 minutes at room temperature. Mixing ratio: 1 to 1. Not recommended for applications in excess of 200°F.



Pint Kit.....P/N 02-30060.....  
Quart Kit.....P/N 02-30065.....

## METLWELD EPOXY ADHESIVE

MetlWeld is a 2-part, equal volume ratio, room temperature curing epoxy adhesive. MetlWeld develops strength earlier than other comparable 1:1 systems and may be used at temps. as low as 50°F. Metal to be bonded should be freshly sanded and clean from grease, wax, oil and other contaminants. Allow 48 hours min. to cure and develop strength at 77°F (longer at cooler temps.) before subjecting to stress. Bonds plain & anodized aluminum, glazed & unglazed ceramic; concrete; copper; glass; galvanized and stainless steel; neoprene rubber and most porous materials. Does not bond acrylic, polyethylene, polypropylene, polystyrene or vinyl plastics.



1/2 Pint Kit.....P/N 01-00406.....  
Pint Kit.....P/N 01-00407.....  
Quart Kit.....P/N 01-00408.....

WP