



# Carbide Processors, Inc.

Northwest Research Institute, Inc.

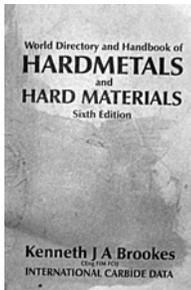
## Newsletter Holidays, 2010

3847 S. Union Ave. Tacoma, WA. 98409 (800) 346-8274

sales@carbideprocessors.com [www.carbideprocessors.com](http://www.carbideprocessors.com)

### What We Are Doing To Help You

1. We have greatly increased our inventories.
2. We have not raised our prices any more than we had to because of suppliers' raises.
3. We have found new suppliers with better prices.
4. We have found new suppliers with better delivery times.
5. You can get custom parts with much lower tooling charges.
6. We buy in large quantities and resell in smaller quantities.
7. We are constantly searching for new suppliers. This is our copy of the Hardmetal Directory which sells for about \$1,000 used. It allows us to match grades from suppliers around the world.
8. We offer all shipping options. You can save money with USPS shipping; Maybe \$5 to \$20 a shipment. Call for details on priority mail and priority mail flat rate



### Carbide Processors, Inc.

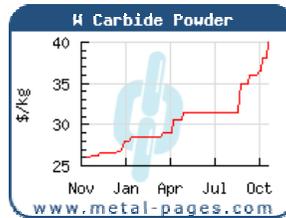
- \* Saves you money by offering lower cost solutions on carbide and braze alloy
- \* Gets you the very best prices by shopping suppliers for you
- \* Is honest and open about prices
- \* Has a 100% satisfaction guarantee
- \* Has the best tech support anywhere
- \* Gives you great customer service

**Give us a try 800 346-8274**

[sales@carbideprocessors.com](mailto:sales@carbideprocessors.com)  
[www.carbideprocessors.com](http://www.carbideprocessors.com)

## Carbide Supply Is a Real Mess

and it looks like it is going to get worse for a couple more years



This is a graph of Tungsten Carbide powder prices for the last year

The Chinese control most of the world supply of tungsten and cobalt. For years they have been selling their products cheaply. Now the Chinese are beginning to see depletion in their supply. So they are raising their prices of the raw material. The term they use for raw material is APT which stands for ammonium paratungstate. This is actually sort of intermediate material in the refining process.

In any case the Chinese lowered their prices until they controlled the world supply. Then they realized that they are starting to run low and began raising their prices. The good news is that a lot of mines that shut down because it wasn't profitable are now beginning to reopen. However it takes a year to three years typically to reopen a mine.

The best projections I can get show continuing increases in prices for 2011 and 2012. After 2012 prices will start to drop.

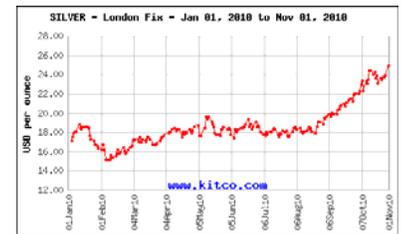
The increase in price of raw material has forced carbide suppliers to raise their prices.

(See P. 2)

## Silver Prices as in Silver Solder



Silver prices last 10 years \$4.50 to \$25 per tr. Oz.



Silver prices last year \$18.00 to \$25 per tr. Oz.

We can offer braze alloy in small quantities as low as \$22.50 per tr. Oz. in spite of the high silver cost. This is a price based on today's silver at \$25 and it changes every day. Call for a quote.

### The best there is for carbide and brazing tech support

Lately we have been told a few times that we are the best there is for carbide quality, customer service and tech support to answer questions and solve problems with carbide and brazing.

I am very much afraid that that is pretty well true. There is Norm Brown at Simonds and I believe there is still someone at Ceratizit who is good in these areas.

Unfortunately that is all there is. What it does come down to is that we really are your best resource for questions and problems on carbide and brazing.

(Carbide Prices cont.)

Multi-metals as added a flat 14% surcharge to their prices. Ceratizit has sent us a new price list that covers only what we have been buying and shows an increase in price of zero in some cases and up to 16% in other cases. Tigra has raised prices about 8% and continues to build inventory. There is concern about whether Tigra can meet the growing demand for their products.

In addition to price increases carbide manufacturers are keeping less inventory, extending lead times and greatly increasing minimum quantities.

We have been buying 100 special parts in a special grade for a customer for several years. The carbide supplier would make us 100 parts in 3 to 4 weeks. Now the minimum order is 500 parts and delivery is 7 to 8 weeks.

Parts that used to be standard, on the shelf, items are now becoming special order items with lead times of 7 to 8 weeks minimum. Maybe the best example of this is Camco. At one time Camco was known for low prices and large inventory. Kennametal bought Camco several years ago and has changed it greatly. They carry much less inventory and, it appears, are not going to carry any more pretinned inventory.

Overall it looks like prices are going to be escalating beyond the recent increases. It also appears that the stock levels and lead times will greatly change.

## One Solution

As many of you know, we continually search for new suppliers who can give us better prices, better service, better quality and anything else that is important to you, our customers.

We have found a new carbide supplier. We have been using them for a couple years now on a limited basis. Their deliveries are very good. They are now more dependable than the better known suppliers and the quality is much better.

Our new supplier delivers excellent quality and they require about 3 to 4 weeks for special orders. They have a very large selection of dies especially for saw tips and other woodworking shapes. If you want a truly custom shape their tooling fee is extremely reasonable. Their tooling fee typically comes in at somewhere around 10% to 15% of what the US or European company would charge. Instead of \$5,000 for tooling our new supplier will probably come in around \$500-\$750.

Underlying all of this is the fact that carbide for woodworking has been sold for less money on a weight basis than carbide for steel cutting.

In many cases the carbide suppliers have treated the woodworking industry as add-on work. It helps fill the plant with work. An often used term for it is incremental work. If you can make a profit with your plant 60% full of metal working carbide then you can afford to make woodworking carbide for less money per ton or pound or gram.

Added into the equation are the companies that sell carbide as a sideline. Their main business is selling machines or saw blades and they just sell carbide as a courtesy to their customers.

## Another Solution

The inventory at Carbide Processors is now much larger than it ever has been and is still growing. A great deal of our inventory is pretinned and ready to use. We still do pretinning here and can readily pretin anything that is currently untinned.

We also have a new supplier who has excellent on custom orders. Their quality is the best we have ever seen, their tooling charges are very low, their lead times are typically 3 to 4 weeks and they seem to meet those lead times about 90% of the time.

## Pricing Saw Repair

There has been a good discussion in the industrial tool sharpening group on Yahoo about how much to charge to replace a single tip. Fees range roughly from a dollar to five dollars.

An idea that is starting to become popular is to charge a flat fee for a total saw tune up.

A saw shop, for example, would have a flat fee of maybe \$30 to totally tune up a saw blade. This would cover cleaning, inspection, hammering, flattening, tensioning, tip replacement as needed up to maybe five tips as well as professional sharpening of the top, face and sides of the tips.

Larger, industrial customers may still prefer piecemeal pricing that the flat \$30 is apparently working well with people who only have their saw sharpening occasionally.

As one Filer explained it, if they have a \$60 blade I tell them I can make it run like new for half the cost of the new blade. They either save half the cost of a new blade and are happy or they buy a brand-new blade and are happy.

### Dragon naturally speaking software

I am now using Dragon voice recognition software. It took about 45 min. to set up and it started working right away. It recognized my speech about 90% accurately the first time I used it. It has a learning function so it is learning new words such as pre-10, Sir Matt and similar that are unique to our industry.

I am a very poor, very slow typist. For me Dragon has been a very good investment.

I have written this using the Dragon software and have not edited it.

(‘pre-10’ was supposed to be ‘pretin’ and ‘Sir Matt’ was ‘cermet’. Other than that Dragon got everything right.)

## Competing with Freud

I had done an analysis of Freud saw blades for one of our customers. He is competing against Freud blades in the marketplace. He is using our Cermet 2 tips and wanted to know how they compare with Freud's.

If you are a customer I will be happy to share this report with you.

### Government help

An old codger named Bud was overseeing his herd in a remote mountainous pasture in Alberta when suddenly a brand-new BMW advanced toward him out of a cloud of dust.

The driver, a young fashionably dressed, leaned out the window and asked the cowboy, "If I tell you exactly how many cows and calves you have in your herd, Will you give me a calf?"

Bud looks at the man, obviously a yuppie, then looks at his peacefully grazing herd and calmly answers, "Sure, Why not?"

The yuppie parks his car, whips out his Dell notebook computer, connects it to his Cingular RAZR V3 cell phone, and surfs to a NASA page on the Internet, where he calls up a GPS satellite to get an exact fix on his location which he then feeds to another NASA satellite that scans the area in an ultra-high-resolution photo.

The young man then opens the digital photo in Adobe Photoshop and exports it to an image processing facility in Hamburg, Germany.

Within seconds, he receives an email on his Palm Pilot that the image has been processed and the data stored. He then accesses an MS-SQL database through an ODBC connected Excel spreadsheet with email on his Blackberry and, after a few minutes, receives a response.

Finally, he prints out a full-color, 150-page report on his hi-tech, miniaturized HP LaserJet printer, turns to the codger and says, "You have exactly 1,586 cows and calves."

"That's right. Well, I guess you can take one of my calves," says Bud.

He watches the young man select one of the animals and looks on with amusement as the young man stuffs it into the trunk of his car.

Then Bud says to the young man, "Hey, if I can tell you exactly what your business is, will you give me back my calf?"

The young man thinks about it for a second and then says, "Okay, why not?" "You're a Member of Parliament for the Canadian Government", says Bud.

"Wow! That's correct," says the yuppie, "but how did you guess that?"

"No guessing required." answered the cowboy. "You showed up here even though nobody called you; you want to get paid for an answer I already knew, to a question I never asked. You used millions of dollars worth of equipment trying to show me how much smarter than me you are; and you don't know a thing about how working people make a living - or about cows, for that matter. This is a herd of sheep. ...

Now give me back my dog.

### Jerome Adams Retirement Plan

If you had purchased \$1000.00 of Nortel stock one year ago, it would now be worth \$49.00. With Enron, you would have had \$16.50 left of the original \$1,000.00. With WorldCom, you would have had less than \$5.00 left. If you had purchased \$1000 of Delta Air Lines stock you would have \$49.00 left

But, if you had purchased \$1,000.00 worth of beer one year ago, drank all the beer, then turned in the cans for the aluminum recycling REFUND, You would have had \$214.00.

Based on the above, the best current investment advice is to drink heavily and recycle.

It's called the 401-Keg Plan

### Christmas Lights



It is never too early to start planning.

### Wing Nut Driver



When I build a machine I like to use wing nuts to hold guards in place. I bought a wing nut driver to speed things up when I do repairs. It was expensive, doesn't work very well and I had to buy a dozen. If you want one free call; Emily at 800 346-8274.



I don't now who this is but she must be industry related or I wouldn't have saved the picture. I do know that is Diane Lane below but I'm not sure how she is industry related either.



# Super "C" Carbide Grade

Tougher than C1 - Better wear than C3

## What Makes Super C Tips Truly Superior

1. Superior Abrasion Resistance - Abrasion or straight wear is countered by smaller, better grain size.
- 2 & 3. Superior Adhesion and Diffusion Resistance (corrosion and chemical attack) Super C grade of carbide has an extremely fine structure so there is very little binder presented to the material being cut. This, combined with the special metallurgical formulation the Super C binder (hint - it's not just plain Cobalt) creates an extremely wear and corrosion material for use in wood, plastic or non-ferrous metals.
4. Superior Fatigue Resistance

**And People Really Like Them - Call Today To Try Them - Most Sizes Readily Available**

Super C	Hardness (HRA)	T.R.S. (psi)
	92.2 - 92.4	530,000 +

Typical C2 values

	Hardness (HRA)	T.R.S. (psi)
C2	92.1	334,000
C2	91.8	334,000
C2	91.5	377,000
C2	90.4	435,000

Typical C Values

	Hardness	T.R.S. (psi)
C1	89 - 92.4	350,000 - 360,000
C2	91.2 - 92.9	250,000 - 400,000
C3	91.4 - 93.6	270,000 - 350,000
C4	89.6 - 93	260,000 - 450,000

### Sawmill Grade Tips

- Transverse rupture strength well above 500,000 psi.
- Rockwell A hardness above 92
- Alloy binder for corrosion resistance
- Grain structure to inhibit both crack initiation and crack propagation
- Micro grain or mixed grain for superior wear

**Carbide Processors, Inc.  
800 346-8274**

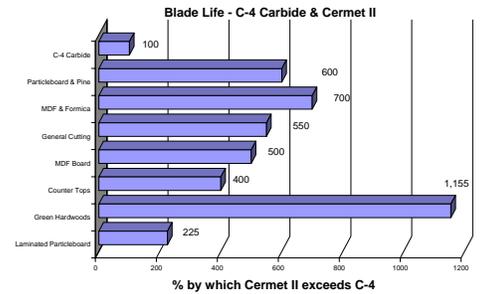


## Cermet II® 8 days instead of 5 in MDF

**Three weeks and three full loads of double side melamine laminate instead of 1 week and 1 load with carbide**

1. 5 blades with standard C-4 carbide cutting 45 lb. single and double sided vinyl-laminated particle board  
\* Cermet II - 15,088 meters / old grade - 6706 meters for **225% as much run life**
2. KM-16 industrial saw cutting 101.6 mm x 152.4 mm (4" x 6") Green hardwoods, oak, hickory, maple and walnut using 11 blades with standard C-4 carbide  
\* Cermet II / 462 hrs / old grade - 40 hrs  
**1,155% as much run life**
3. 406 mm (16") 100 teeth cutting countertops  
\* Cermet II - 4 weeks / old grade - 1 week (4 times) **400% as much run life**
4. 406 mm (16") 80 teeth cutting MDF Board  
\* Cermet II - 10 days / old grade - 2 days (5 times) **500% as much run life**
5. 305 mm (12") 100 teeth TCG Miter cutting oak, Compressed Fiber Board, Plastic  
\* Cermet II - 154 hrs / old grade - 28 hrs (5.5 times) **550% as much run life**
6. 305 mm (12") 60 teeth cutting MDF, High Pressure Laminate (Formica)  
\* Cermet II - 56 hrs / old grade - 8 hrs (7 times) **700% as much run life**
7. G 1060A on Chop Saw cutting Particle Board and Pine Dowel Rods  
\* Cermet II - 48 hrs / old grade - 8 hrs (6 times) **600% as much run life**

**Use Cermet 2 instead of carbide and make your life much easier**



## Cermet II® Successes

Several times the life in a window and door plant.

3 times the life in Corian.

8 days instead of 5 in MDF and we have an even better grade coming.

Twice the life in beetle killed Lodge Pole pine.

### Benefits You Get

- \* Grinds like regular carbide
- \* Gives a better edge than carbide
- \* Stays sharper longer than carbide
- \* Great increase in fracture toughness.
- \* More corrosion-resistant
- \* Better at high temperatures
- \* Cuts faster
- \* Cuts faster & longer yet is tougher
- \* Longer runs and less downtime.

## Report from Marvin Windows

On the saw that we tried. How many times we resharpen a blade before we order new or have retipped we are not sure. Most blades get damaged by hitting something so we have the carbides retipped a lot. How often do regular blades have to be resharpened? We normally have our carbide tipped blades sharpened every week.

The new Cement II blade normally last twice as long before it gets damaged. The best so far is four weeks and one and a half million cuts before we changed it out which is four times longer.

Hope this helps and keep up the good work on those tips.

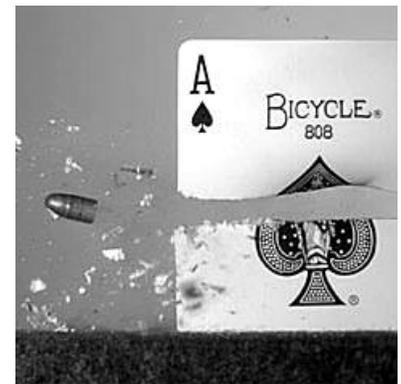
Nathan Hull, Grinderman  
Marvin Wood Products

## Wisest Things the Old-Timers Say

1. The faster I go, the behinder I get
2. The boss will forget about the time it took you to complete this job long before he'll forget about you scrapping it
3. If you can't afford it then you definitely can't afford it.
4. Don't hire for skills, hire for attitude.
5. There's never enough time (and money) to do something right, But there's always time and money to do it over.
6. Harder than the Hobbs of hell.
7. Harder than a whore's heart
8. Harder than woodpecker lips
9. Measure twice, cut once
10. Poor planning on your part does not constitute an emergency on my part.
11. He's as welcome as a fart in a space suit!!
12. Seven P's - prior proper planning prevents piss poor production
13. Cheap, fast, good. Pick any 2.
14. You'd get used to hanging if you hung long enough.
15. You don't know sheep sh#t from wild honey
16. Harder than the back of my head
17. Colder than a witch's boobies in a brass bra (ok, this is the pc version)
18. Busier than a one legged man in a hiny kickin contest (also pc version)
19. The three rules of mobile service business - get the money, get the money, get the money
20. It's about the square root of zero point sh\_t!
21. Marry a woman with very small hands....so that on your wedding night, when she grabs you for the first time, it will look bigger.
22. Plan the work, work the plan
23. We're not building a piano, just air plane parts
24. We're surrounded. That simplifies the problem - Lewis B. "Chesty" Puller, USMC
25. Let's do something even if it's wrong!
26. Never enough time to do it right, but there's always enough time to do it over!
27. We are not building a moon rocket; we are building a working helicopter!!

28. Son, I have forgotten more than you will ever know.
29. The hammer is the most important tool in your toolbox.
30. When I was fourteen, my father was so ignorant I could hardly stand to have him around. When I got to be twenty-one, I was astonished at how much he had learned in seven years. Mark twain,
31. We're not all working out of the same tool box
32. Put his brains in a blue jays head and he'd fly backwards
33. He is a confident leader-he never let's the facts interfere with his own assumptions.
34. Heavier than a bucket of hog's liver.
35. Hotter than a pistol.
36. Wound up tighter than an idiot's watch.
37. As coherent as a fart in a windstorm.
38. As subtle as a fart on a folding metal chair.
39. Colder than a brass monkey's balls.
40. God's wonderful railway - from an old story about apprentices starting work in the GWR (Great Western Railway Co.) In Britain in the 1850s (then still a 7ft gauge railway.) At the major depot and loco shops of the company at crew what you need for the job here , son, is a big hammer, a big chisel, and a big head ( from the days when locomotives were basically carved out of cast iron and steel plate.)
41. If a job is worth doing, do it right.
42. Don't put your fingers where you wouldn't put your face.
43. Go over a boxcar and under a line.
44. Never put your finger into a moving orifice unless you intend to leave it there.
45. Some people get older without getting any smarter
46. It depends on how you count
47. Watch him, he counts funny.
48. The squeaky wheel gets the grease.
49. You can't pick your relatives, but you can pick your friends
50. Poor breeding shows
51. When I was 18, and working as an electrical construction apprentice: I was up 20 ft. On a ladder hanging #2 conduit, in the blooming steam engine room. Hotter than hell, everything was

- filthy dirty and greasy. My older mentor wireman was sitting on an electric motor; he had covered in cardboard to keep his clothes clean. He hollers up at me above the roar of the steam engine, hey kid, let me know when you get tired, we'll sit down and rest.
52. When the last man on earth dies, there will be a coyote and a blow fly fighting over his dead carcass
53. If a sheep is a ram and a mule is an ass then how come a ram in the ass is a goose?
54. If you want to play with the big dogs, then you had better be able to piss in the tall grass
55. Hard as the hinges of hell
56. Shaking like a cat sh\*tting razor blades
57. Like sh\*t through a tin horn
58. Sh\*tting like a Christmas goose
59. Never put your finger into a place you wouldn't stick your wiener
60. "Tight as a boar's \*ss at fly time
61. People buy things they don't need - with money they don't have - to impress people they don't like.
62. Don't worry about what they want kid....you make sure they have what they need
63. I've cut the damn thing three times and it's still too short
64. Pay attention kid, they'll forget that you take a little longer, but always remember if you're a hack
65. If it's worth doing once, it's worth doing right
66. Work it may....shine it must
67. No one is worthless - they can always be used as a bad example
68. My job description is defined by the square root of minus one
69. His/her elevator may go all the way to the top but not all of the lights will come on
70. He's/she's 12 ants short of a full picnic

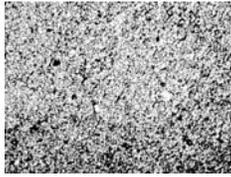


## Purified Flux

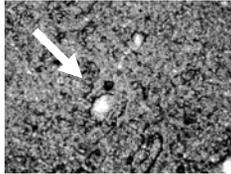
30% To 100% Better  
Braze Joints  
(50x magnification)



Purified flux  
Smooth &  
consistent



Standard flux  
large grains of  
foreign material



**You can see and feel the difference immediately.**

Purified flux is black flux that has had extra processing steps. These processing steps take the black article out and leave the flux a rich, creamy brown color. If you take a little of each flux and rub it between your fingers you can feel that Purified Flux is not only smoother but the particles are smaller and there are no extra large particles.

Flux is made to prevent oxygen from getting to the parts as they are heated. Steel and especially tungsten carbide oxidize at room temperature. The hotter they get the more they oxidize. Above 1,000 F tungsten carbide oxidizes extremely rapidly and forms an unbrazable surface. Purified flux is good for more time at higher temperatures, up to 1,700 F.

The original idea with flux was that it was to be applied on top of the braze area. However the critical part of saw and tool brazing is what goes on inside the braze joint. Ordinary flux is inexpensively made and has up to 10% odd size particles and non-active minerals in it. These odd size particles and non-active minerals get lodged in the braze area and can seriously effect the strength of the braze joint.

**Purified flux is cleaner, smoother, creamier and much more effective.**

5 # jars

Case (6 jars @ 5#) \$ 464.31

Single jar \$ 87.39

## Braze Alloys (Silver Solders)

The right braze alloy can make a huge difference in performance

Braze Alloy Impact & Bond Strength Tests	
<b>High Impact</b>	<b>100%</b>
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	75%
A56T - 56% Silver with Tin	0%
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	64%
A50N with copper spheres added	67%

### Stop tip Loss - Prevent Carbide Breakage

Saw tips are brazed onto a steel saw using braze alloy. When a tungsten carbide saw tip breaks it is usually bad carbide, the wrong grade of carbide, the wrong braze alloy or a combination of these.

The brazing process forms a three part composite. The success of the composite depends on the tungsten carbide, the steel, the braze alloy and the way it is all put together. The braze alloy has to do three things. 1. It has to keep the tip on the saw. 2. It has to cushion the tip because the tip suffers a lot of impact stress when the saw cuts. 3. It has to compensate for the difference in expansion between steel and tungsten carbide as they are heated and cooled during brazing.

## Buy Our Books

Buy online or call 800 346-8274

1. Carbide Saw Specification Manual  
<http://www.cafepress.com/sawspecs.80466877>

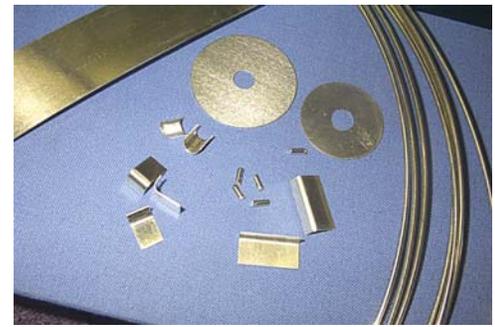
2. Carbide Saw Manual - Lowell freeborn  
<http://www.cafepress.com/freebornmanual.80464996>

3. Managing Coolants from Machining and Grinding Operations  
<http://www.cafepress.com/managecoolants.80458178>

4. Building Superior Brazed Tools  
<http://www.cafepress.com/superiortools.93943435>

5. Chisels on a Wheel by Jim Effner  
<http://www.cafepress.com/chisels.90813670>

6. Braze Failure Analysis  
<http://www.cafepress.com/brazefailure.79434854>



We sell braze alloys (also called silver solders, high temperature silver solders, or braze filler metals.)

We supply the finest information in the world on the selection and use of braze alloys for carbide brazing.



### The Finest, Most Consistent Braze Alloys for Tungsten Carbide

- 26 Different braze Alloys
- All AWS approved
- All inspected to parts per million
- All alloys exceed AWS specifications
- Cadmium free
- With Cadmium
- Hi Impact – developed for Weyerhaeuser
- Ultra Hi Strength – High Temp.
- Low Silver – Very High Strength
- Low Temp. with high strength
- Wire – all diameters
- Ribbon - all sizes
- Sandwich alloy ribbon
- Brazing preforms

### Why Quality Makes a Difference

(American Welding Society AWS 5.8) Braze alloy can be within AWS specifications but it can vary in brazing temperature by as much as twenty degrees. This means that you can have cold joints and tip one end or zinc loss and more broken tungsten carbide tips at the other end.

Our braze alloy is accurate and measured within parts per million. It is typically four times better than it has to be or more according to government certified analysis. It brazes the same way every time.

## On Selling Us Sawblades

We occasionally buy a few saw blades. We do this for two reasons. One is to test new technology. The other reason we buy saw blades is to resell them.

We have spent a lot of years and a lot of dollars developing advanced grades of saw tips. We now have several grades of saw tips for different applications that braze and grind like regular carbide buttons stay sharp several times as long. Depending on the grade of and the application they may stay sharp from 2 to 10 times as long.

Once we developed these grades the next challenge was to test them. It doesn't matter how much testing we do here or have Forintek do in their lab, nothing counts except what happens in the real world. This is why we have test blades built for us occasionally.

When we first started having blades built it was a real shock to find out how widely the quality varied from supplier to supplier. It was even more surprising to see how widely quality could vary coming from a single shop.

I still have a letter from one of the top woodworkers in the country and all it says is "I thought they would be better than this." It came with a couple sample pieces of wood illustrating just how badly our saw blade cut. The company that made the saw blade for us said that it just slipped away from them.

Had the blade been good, we would have had an excellent endorsement and a nice magazine article.

Since the blade was very bad all I have is a memory that is still painful several years later.

The second reason we buy saw blades is to resell them. This is part of a push - pull marketing strategy. We are trying to get people to try our advanced grades of saw tips by talking to them directly. This article is an example of the Push part of push - pull marketing.

The pull part of push - pull marketing is to get an end user to request an advanced saw from one of our customers.

We have a great deal of information about saw blades and advanced materials saw tips on our website. The idea is to attract the attention of people who are really interested in saw blade performance, have them try one of our blades and then request it from wherever they buy saws.

We don't sell saws in any large quantity because people who buy saws in large quantities are already being serviced, probably by somebody reading this. So what we do is try to explain to people that they should use our advanced saw tips because they can pick up new customers and sell them saws where they can get a little higher profit.

This is working very well for a couple dozen saw shops around the country and working very, very well in several manufacturing plants where they service their own saws.

This still leaves a lot of shops who are not using our advanced grades of saw tips. That's okay.

### Thoughts on What Makes a Good Saw Blade

1. Personally I think the very best saw blades come from a very few, really top-end custom shops.
2. In this case it starts with the saw plate and the type of steel used in saw plate.
3. The saw tips are an advanced material which is a blend of traditional tungsten carbide with other carbides added and the binder is an alloy such as cobalt / chrome or nickel / chrome.
4. The braze alloy contains manganese.
5. The grinding is done so that each tooth is ground plus or minus 0.0005 inches from spec.

6. The total runout of a ten inch saw blade is 0.002 inches to 0.0025 inches.

7. The tips are large enough to provide many re-sharpenings

8. The gullets are slightly oversize.

9. I have never seen any evidence that one shape of stress relief (expansion) notch was clearly superior to another to the point where it made a significant difference. It may be the case that one shape is better than another but I've just never seen any evidence.

10. I understand that laser cut scrollwork on a saw blade can reduce the noise level especially if it is epoxy filled. However this can make it very difficult to service the saw. A think in many cases the fancy scrollwork is more marketing than performance oriented.

11. I like a gullet that is designed to prevent work hardening.

12. I like the bore that is just a wee tad bit larger than nominal all of this can be very machine dependent at some machines shafts which are just a wee tad bit smaller than nominal. Of course some machines have shafts that are considerably smaller than nominal, with bumps or dips and that may be bent at a strange angle.

13. 600 grit seems to give a good finish. I do know of grinders who achieve excellent grinds in a variety of different ways. As long as the grinding is smooth, straight, centered and does not overly stressed the tip I think it is satisfactory.

14. I will admit that the coatings put on the saw body can give an advantage in certain cuts at extreme angles. Again I think that the coatings are typically much more marketing related than performance related. Again there's nothing wrong with the coatings in terms of performance but they can provide a real problem when servicing the saw.

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## **Service Saws Faster and Easier**

When we were in New York we got to meet Bruce Moore of Wagner Lumber. He told us he really liked our tips because they don't wear nearly as much as other tips. When he takes the saws off they only need a couple quick passes to restore the edges. It is fast and easy and really helps cut down saw service times.