

Inlay Techniques

Craig Timmerman craig@armadillowoodworks.com
www.armadillowoodworks.com

armadillowoodworks on Facebook and YouTube

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Safety Notice

- Working with wood that has defects is inherently dangerous
- Be VERY careful when working with any wood with any defect
- All wood is not the same
 - What works with one species may not work for another
- What works for one woodturner may not work for you
- Understand the risks and protect yourself from injury
- **You are responsible for your own safety (YARFYOS)**

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- Even small bits of wood flying off the lathe can be dangerous if proper safety techniques and gear are not used
- Defects include cracks, bark inclusions, holes, decay
- Wood not same—what I can do with mesquite, might not work for pecan
- Safety gear—face and eye protection at a minimum, line of fire

Slide 7

d1

dillo, 2/12/2021

Background

- Have been using inlay material for most of my woodturning career
- Most has been used with mesquite
 - Mesquite will always have some kind of defect
- Use inlay to highlight the natural defects
- Inlay Material
 - Crushed, man-made turquoise
 - Natural crushed stone, turquoise, malachite, etc
 - Colored powders, wood dust, metal powders
- I only inlay defects, but techniques will work on man-made designs

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- Mesquite-if you can't find a way to "use" defects, pick a different wood
 - Cracks and bugs are most common
- Far less safety concerns when working with man-made designs
- Google Stephen Hatcher for many references for mineral crystal inlay
- Be aware of safety concerns with materials you are using
 - Dust! Includes metals!
 - Toxicity – e.g. malachite

Inlay is not for Everyone

- Don't attempt if:
 - You absolutely hate to sand
 - You hate to buy sandpaper and use it until there is no grit left
 - Worn out 120 is not 220
 - You don't have a power sander (a.k.a. angle drill)
 - And you think a power sander should last a lifetime
 - You don't have good sandpaper
 - You don't have a dust collector and personal dust protection
 - You don't like spending lots of money on adhesives
 - You are not going to pay attention to safety issues

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Blank Preparation

- Before mounting on lathe, inspect for defects
 - Bark inclusions
 - Cracks, especially any with gaps
 - Cracks that connect to another crack
 - Structural cracks—those running $\frac{1}{2}$ or more around a blank
 - Small branch locations
 - Holes of any kind—voids, bugs, etc.
- If any defect worries you, move on to a different piece

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- Inclusions – there is no structural strength in a bark inclusion
- Gaps – crack with gaps is definitely a failure point
- When cracks meet, the wood between the cracks is a failure point, this almost always fall (fly) out
- Any crack is a possible issue. This is a big area where species of wood will dictate what you can/cannot do.
 - Cracks don't get smaller as you turn
- Any crack can be a structural defect, but ones that go from one side to the other are a big indication the piece may break apart
- Branch locations are like mini-pith areas. Will often crack and split as piece dries
 - Many have small amount of bark around them and they can fall out
- Holes are weak spots, and can cause issues, especially during hollowing
- While the larger the piece, the more dangerous, small pieces flying of on a mini lathe just as dangeous

Blank Preparation – secure defects

- Note-IMHO, CA glue is not a structural glue
- West System epoxy
 - 105 resin
 - 205 fast hardener
 - 407 and 410 fillers (don't use 406-has silica in it)
 - G/Flex 650

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- West System is like 5:1 mix, buy the pumps!
- Why fillers—make epoxy into whatever consistency you want
 - Mayonaise, peanut butter, does not change bonding strength
- 407 low density faring filler, adds strength, turns, but is hard
 - Structural defects
- 410 microlight faring filler-less strength, turns easy
 - Voids, bugs holes
- Do NOT use silica filler-406!
- G/flex is a flexible epoxy
 - Use for smaller areas as can mix small batches
 - Can add fillers to it
- Now can buy via Amazon, or other distributors. Most marine supply stores carry it.
- Other epoxies probably the same, e.g. System 3, but really need something that works with fillers, which are marine epoxies

Blank Preparation – secure defects

- West System epoxy



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Blank Preparation – secure defects

- Bark inclusions- Remove ALL bark, fill gap with epoxy



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- Inclusions – must glue wood to wood, if bark exists, still weak spot, West System with fillers
 - Bark inclusions only issue with side grain—bowls, e.g. crotches
 - On vase forms I try to keep the bark inclusions

Blank Preparation – secure defects

- Bark inclusions- Remove ALL bark, fill gap with epoxy



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 - Bark inclusions only issue with side grain—bowls, e.g. crotches
 - On vase forms I try to keep the bark inclusions
- Inclusions often go partial around the side/edge

Blank Preparation – secure defects

- Cracks with gaps
 - Make opening larger if needed, fill with epoxy
- Connecting cracks
 - If hairline, CA glue might stabilize enough, no good if gaps
 - Cut into cracks and fill with epoxy

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- Cracks can develop as piece dries
 - Minimize by rough turning to uniform thickness
 - Coat end grain to slow drying there-end grain dries out faster and will move more
 - Dale Larson told me I should chamfer the bowl rim as it will reduce cracking
- Gaps – crack with gaps is definitely a failure point
- We also have some wind checks/shakes here
 - Defects that exist even before drying
- Any crack is a possible issue. This is a big area where species of wood will dictate what you can/cannot do.
 - Cracks don't get smaller as you turn

Blank Preparation – secure defects

- Cracks



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Blank Preparation – secure defects

- Cracks



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- Typical mesquite cracks—these exist from when you cut the tree, they don't typically appear later
 - If use end grain sealer, they rarely get bigger

Blank Preparation – secure defects

- Cracks



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- When cracks meet, the wood between the cracks is a failure point, this almost always fall (fly) out
- Any crack is a possible issue. This is a big area where species of wood will dictate what you can/cannot do.
 - Cracks don't get smaller as you turn

Blank Preparation – secure defects

- Cracks



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- Prepping the blank
 - Cut into all existing cracks if you can-go as deep as you can
 - Create space for epoxy
 - Done on outside and inside of bowl

Blank Preparation – secure defects

- Cracks



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- Fill cracks with the West System epoxy and 407 filler

Blank Preparation – secure defects

- Cracks



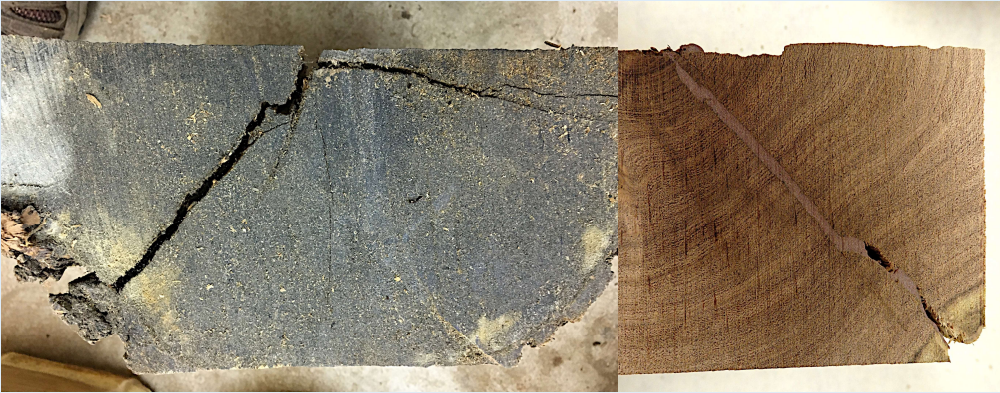
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- Mesquite example

Blank Preparation – secure defects

- Structural cracks
 - Use different piece
 - Break into two pieces and glue together with epoxy



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- Structural
 - Crack goes more that half-way around the blank
 - Sometimes can epoxy without breaking, but rarely
 - Best to not use piece or break apart and glue back together

Blank Preparation – secure defects

- Small branch locations
 - If bark exists, cut it out and fill area around it with epoxy
 - If no cracks in center, stabilize with a bit of CA
 - May still open up and need fill later

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- Branchlets as I call them-Place where small limb was
 - Often these have small bark ring around which will loosen over time
 - Sometimes these fall out during turning and you won't find the piece-treat like filling void
 - Also can be a mini-pith area, prone to cracking
 - Dig around and secure with CA or epoxy if they are loose
 - May need to cut into middle and fill that—pith cracks

Blank Preparation – secure defects

- Small branch locations



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 - Often these have small bark ring around which will loosen over time
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 - May need to cut into middle and fill that—pith cracks

Blank Preparation – secure defects

- Holes of any kind—voids, bugs, etc.
 - Bug holes – clean out and fill, if not an issue, these can wait
 - Larger voids – need to understand structural effect
 - If needed, clean and fill with epoxy

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- Bug holes – if think it will go all the way through, best to fill before turned
- Voids – May need to fill so you can securely turn the piece
 - Can remove the epoxy later to expose the void
 - If fill with epoxy, may need to be done in layers as deep fills can heat up and bubble
- Voids/hole must be clean--Nothing sticks to dirt

Blank Preparation – secure defects

- Holes of any kind—voids, bugs, etc.



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Turn outside shape

- Defect pieces should be turned slower
- Stay out of line of fire
- Safety gear, especially eye and face protection
- Defects must be tracked throughout the turning
 - Stop often
 - Are cracks/voids getting bigger?
 - On filled defects – you may turn fill away and instability is revealed again and must be corrected.
- When finished, go through defect detection and securing process again

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- Face protection is just as important as eye protection
 - For me, safety glasses or face shield by themselves not enough
- I have been know to secure defects 2-3 times

Turn outside shape

- Defects must be tracked throughout the turning



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- Outside partially turned, reveals need for more securing

Turn inside shape

- Removing material from inside releases tension in wood and can cause defects to change.
- Do not try to impress someone with how thin you can turn something
 - Epoxy needs a glue surface
- Turn a section at a time, don't turn entire piece to final thickness
 - Stop and check during and after each section, secure inside as needed
- **Be aware of changes in balance and sound of piece**
 - Stop immediately if piece wobbles. High pitch sounds can indicate failure is imminent

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- Difficult to secure inside of hollow forms. Keep speed slow and stay out of line of fire.
- Piece not running true usually means its coming apart
- High pitch sounds happen as piece gets thinner

Final prep for inlay

- Shape must be complete before inlay is done
 - Most of my inlay material cannot be cut
 - If reshape after inlay, you may end up turning some away and have to redo it
- Sand entire piece to 120 grit
 - Remove all turning artifacts, e.g. tearout, tool marks
 - Use 80 grit if necessary, but don't sand entire piece with 80
- Want all turning artifacts removed before doing inlay
 - Could end up sanding inlay away if you don't
 - Sanding can also reveal other small defects
 - Want everything identified early in the process

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- Main issue here is we don't want to redo inlay process as it is time consuming
 - Find all defects now so only fill once
- Need to remove turning artifacts before inlay
 - Don't want to have to sand them out later as you might remove some of your inlay
 - Don't want to accidentally put inlay into these
- Sanding-only use 80 grit where needed, don't add scratch marks where not needed

Make space for inlay

- Will talk defects here, but inlay space can be purely decorative, process is the same
- Need to make recess for inlay
 - Approximately 2mm deep, at least 1-2mm wide
 - Sanding removes more wood than you think
 - Easy to sand areas should be deeper, e.g. rims of bowls
- Wider recesses allows for bigger grit inlay
 - Too thin and you will only fill with powders
 - Also need a bonding area
- If cutting into a crack, make it longer than you think it is
 - Cracks are rarely only on one side
- Seal cuts with small amount of CA

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- In most of my cases I am securing cracks with the inlay. I need to recess to be big enough so the epoxy has enough surface area to bond to and secure the crack
- If you just fill with a powder, it has no “depth” and can look “painted”
- Cracks are always longer than they look
- Cracks on inside are always on outside, cracks on outside might not go all the way thru.
- Cracks sometimes go at a angle and therefore not be directly in-line on inside and outside
- Must identify all defects, at least I think it looks bad not to fill them all
- Seal cracks with CA so bonder doesn’t soak in

Make space for inlay – cont.

- For defects you secured earlier, you need to clean out some of the epoxy to make your recess.
 - Make sure sides of recess are clean of epoxy as you might reveal it as you sand down the inlay
- Bug holes/voids should be filled to minimize amount of costly inlay used.
 - Fill with epoxy. Sawdust and CA can be used if not structural.
 - Use “blue” tape to cover one side if hole goes all the way through
 - Need to make sides of recess straight or angled out, think “U” shape, not “O” shape
 - Once fill is dry, dig out as needed to get 2mm recess

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Make space for inlay – cont.



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Make space for inlay – widen



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- Make sure sides of recess area are clear of any epoxy
 - Easy to expose during sanding

Make space for inlay – seal with CA



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- After opening the cracks, seal with CA as bonder can seep into wood
 - Not a bad thing but it pulls away from fill and you have to add more epoxy later
 - Not always necessary depending on wood
 - Also have to balance CA “bleed”

Tools and bits

- Rotary tool, e.g. Dremel or Dremel-like, 25000 rpm+
- Air die grinders or micro die grinders
- Air compressor
- Bits
 - RotaryChisel.com – CT101B cutter
 - Dremel 9909 – triangle carbide cutter
 - Dremel 194 – 1/8" high speed cutter
 - Dremel 115 – 5/16" high speed cutter
 - Dremel 193 – 1/16" high speed cutter
 - Dremel 9911 – teardrop cutter
 - Various ball cutters

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- Does NOT have to be a Dremel. Harbor Freight versions last just as long
 - Only issue has been collet strength. Cannot find replacements
- Many other cutters available
 - I like some of the larger Foredom typhoon bits and narrow spikey bits for bark inclusion areas

Tools and bits

- Rotary tool, e.g. Dremel or Dremel-like, 25000 rpm+



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 - Only issue has been collet strength. Cannot find replacements

Tools and bits

- Air die grinders or micro die grinders



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- Typically cheap air tools use more air thus require larger compressor
- Air tools, like this one run at higher rpm, less torque, only good for small bits
- Their smaller size gets into tighter areas

Tools and bits



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- Primary cutters I use
 - Dremel 9909
 - Dremel 194 (115 is bigger version, 193 is smaller)
 - RotaryChisel CT101-B

Tools and bits



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- Primary cutters
 - Dremel 9909
 - Dremel 194
 - RotaryChisel CT101-B
- Ball cutter great for bug holes

Tools and bits



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- Many other cutters available
 - I like some of the larger Freedom typhoon bits and narrow spikey bits for bark inclusion areas

Fillers

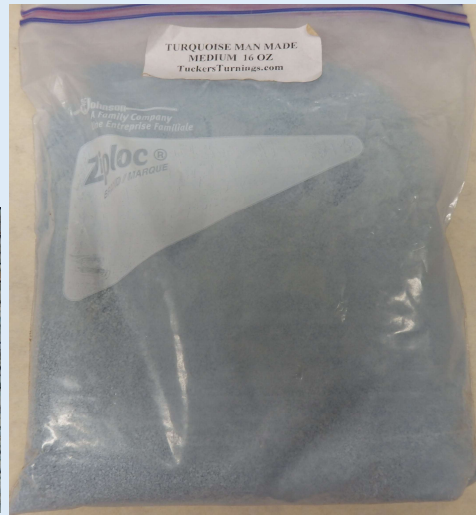
- Use filler of your choice
 - Highly recommend having some grit in filler for texture
 - Crushed, man-made stone
 - Turquoise, coral
 - Natural crushed stone, turquoise, malachite, etc
 - Colored powders, wood dust, metal powders
 - Key filings, e.g. Home Depot
- Beware, some stone is actually toxic in powder form
 - E.g. malachite

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- You can use whatever you want, but should consider something with high contrast
- Beware, some stone is toxic in powder form, e.g. Malachite
- Filler grit – texture to fill, my man-made turquoise comes in chips, medium (like sand), powder
- I like using powder base to color, if don't you may need to color background, e.g. if filled with epoxy, color it black
- You can use just powder, easiest to sand, but then you get comments like “did you paint those lines” Also, takes a lot of powder to thicken the mix

Fillers



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- Source of man-made turquoise-TuckersTurnings.com
- Three sizes
 - Chips, medium, powder
 - Sold by the pound-qt ziplock bag
 - Also sells blend-don't buy, sorts out, chips too big for many cracks

Bonders

- Bond Optic epoxy
 - UV resistant
 - Requires use of a scale to measure
 - Use – anything long term, structural bonds, if item will be washed
- CA glue
 - If use accelerator, prefer aerosol accelerator - Kwik-Frame
 - Fast, cheap
 - Not structural, not long lasting (opinions vary)
 - Use – inexpensive items, fast turn around for profit, simple gifts
- Fast epoxy – only if using black/brown fillers

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- You can use whatever you want, but should consider longevity and UV stability
- Bond Optic – developed for glass and lapidary industry, less expensive than Hxtal
- High UV resistant – 20 years in simulation in testing, my tests 20 days
- Typically faster a epoxy sets, less UV stability
 - 5 minute epoxy will start to turn yellow with very little sunlight exposure
- Cons
 - Slow dry time
 - 7 hours before rotate
 - 2 days before sanding
 - 7 days to full cure
 - Must use scale 2:35 to 1 mix
 - Very runny (low viscosity)
- CA is very UV stable
- Cons
 - Not structural
 - Short lifetime (10 years?)
 - Some experts believe how you use affects lifespan
 - Mix as aggregate
 - Limit use of accelerator

- Fast epoxy-5 minute, black fillers, anything where UV stability doesn't matter

Bonders

- Bond Optic epoxy



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 - 7 days to full cure
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Inlay with Bond Optic

- Use filler of your choice
 - Highly recommend having some grit in filler for texture
- Make sure recess has been sealed with CA-must be dry!
 - Use surface resist, e.g. shellac, sanding sealer
- Measure using digital scale (AWS-100, Amazon)
 - Needs to read 100th of a gram, have “tare” button
- Transfer Bond Optic to small, squeeze bottles
- Small batches, 2 to 1 mix (Can use 2.35 to 1 if weighing it)
 - .50/.25 (.75) .66/.33 (.99) 1.0/.50 (1.50) 1.6/.8 (2.40 huge!)
 - Small cups to mix (e.g. bottoms of yogurt cups)
 - Mix only what you can fill in 5 minutes
- Can heat for a couple of minute to accelerate set time
 - Recommended if shop temp <70 degrees

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- Filler grit – dimension to fill, my man-made turquoise comes in chips, medium (like sand), powder
- Recess must be sealed or Bond Optic will soak in too much!
- CA MUST be dry! It does not interact well with Bond Optic
 - Don't over use, or it will heat to fast and bubble up
- One Bond Optic vendor says 2 to 1 mix another says 2.35 to 1 if using a scale
 - I use the 2.35 to 1 ratio
- Bed, bath and Beyond has nice squeeze bottles

Inlay with Bond Optic-cont

- Once Bond Optic is mixed, add in filler
- For turquoise - mix combination of medium and powder
 - enough medium for texture, powder for background color
 - If don't use powder, background will be color of wood
 - Don't add chips unless only filling large areas
 - Don't make mix too thick, want it to "flow" off mixing stick
- Trowel into recess, if you have to force it, it's too thick
 - Fill proud of recess, it will soak in some
- Fill what you can without it running
 - Dams can be made with blue tape
- For large areas add chips for more texture

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- Filler grit – texture to fill, my man-made turquoise comes in chips, medium (like sand), powder
- I like using powder base to color, if don't you may need to color background, e.g. if filled with epoxy, color it black
- You can use just powder, easiest to sand, but then you get comments like "did you paint those lines" Also, takes a lot of powder to thicken the mix
- I use small piece of 1/24th veneer to stir—can cut to size
- Trowel thickness—slides off stirring stick
- Work thru fill, poke with stick to reduce bubbles
- Add chips adds needed, sprinkle on top, work with stick
- Really can only to 2 fills in same object in one day,
 - Have tried to speed up, if warm enough might be able to do a fill every 4 hours
 - Seems to stay in place up-side-down
- Wait 2 days before sand, 7 for finish

Inlay with Bond Optic



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- Need scale that reads to 1/100th of a gram
- Tare button to zero out after putting cup on scale
 - This scale will read zero if put cup on scale and then turn on

Inlay with Bond Optic – fill proud of surface



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- Over-fill the defect as the mixture tends to settle
 - Want to reveal the grit with the sanding
- Finished fill
- Note small gaps where epoxy has pulled away from fill
 - Happens if don't seal crack before putting in epoxy or if epoxy mix was a bit too "dry" (too much filler for amount of epoxy)
 - These gaps need to be filled with either clear epoxy or epoxy + powder

Inlay with Bond Optic – Prop work to prevent epoxy run



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- Need to prop up your pieces to minimize the epoxy from running

Inlay with CA

- Use method suggested by Stephen Hatcher
- Apply surface resist for non-mesquite (shellac, sanding sealer)
- Place largest size inlay material first, secure with minimal CA, do NOT flood
- Add next lower grit level, filling gaps of first, secure with minimal CA
- Use powder to fill remaining gaps, secure with liberal amount of CA
- According to Stephen this creates an aggregate like concrete and makes it hold/last better

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- Minimal use to prevent flash over, heats up too fast and bubbles up
 - Must dig out and redo
- Use fan to blow fumes away
- Thin bottle tips from Starbond are great and main reason I use that CA
- Typically do not use accelerator, doing 5 or more things, work each grit on each, by time you get to first, CA is dry
 - Accelerator can make CA brittle
 - Used incorrectly it can flash over
 - If use spray across piece, instead of directly at it, less flash over
- CA is very UV stable
- Cons
 - Not structural
 - Short lifetime (10 years?)
 - Some experts believe how you use affects lifespan
 - Mix as aggregate
 - Limit use of accelerator

Inlay with CA



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- Thin bottle tips from Starbond are great and main reason I use that CA
 - Always keep one on the bottle and that keeps original bottle tip from clogging
- Really like Kwik Frame accelerator-fastest I've used
- Typically do not use accelerator, doing 5 or more things, work each grit on each, by time you get to first, CA is dry
 - Accelerator can make CA brittle
 - Used incorrectly it can flash over
 - If use spray across piece, instead of directly at it, less flash over

Inlay with CA



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- Example of CA fill in mesquite
- Note CA “bleed”
- Non-mesquite you should apply surface resist, like shellac or sanding sealer to minimize bleed
 - Test this on scrap piece of wood first, before attempting to use CA as bonder
- Picture on right is after sanding

Sanding

- Most inlay material dulls tools, so sand it to level it out
- Man-made turquoise
 - Chips-80 grit min, Medium-120 grit min, Powder-180 min
- Need very good sandpaper-Turningwood.com
- Sand first grit with lathe OFF
 - Rest with lathe on, but blow off and check after every grit
 - Helpful if can run lathe in reverse
- After 180 grit, check for bubble holes in epoxy
 - Refill with epoxy/powder or CA/powder
- Don't use worn-out sandpaper! Just wasting time.

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- Even if can turn it, tool usually bounces
- The remount in a chuck doesn't run true enough, could leave in chuck when fill
- I almost always start sanding with 80 grit, just saves time
 - Real turquoise is at same hardness level as your sandpaper
- If you have sanding discs now that separate when sanding wood, they will never work for sanding mineral inlay
 - Sandpaper heats up too much
 - Mirka sandpaper from Turningwood.com hold up better than anything used, never separates
- Running lathe in reverse reduces sanding marks
- Need to constantly check—usually sand with lathe on, stop, check, touch up with lathe off, go to next grit and repeat
 - Even use magnifying glass to look for scratches
- Bubbles are a pain, happens with any epoxy, worse with faster setting
 - Less if careful when putting in to work through it
 - How you fix depends on how much time you want to spend
 - If use epoxy again, 2 days before can finish, so many time if bubble is on outside, I use CA

Sanding

- Need very good sandpaper-Turningwood.com



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Sanding

- Angle drills very useful
 - Drill and mandrel from thesandingglove.com



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- Power sanders are a must
- Like these angle drills as they can be used in one hand
- Medium density mandrels

Extra steps for non-mesquite

- Wood must be dry - Reduces amount of movement
- If filling defects, high suggest using epoxy to stabilize before inlay on top
- Apply a surface resist, e.g. sanding sealer, shellac
 - Bond-optic and CA soak in/bleed, surface resist minimizes this
 - Wipe around area to be filled and let dry
 - Then seal recess with CA prior to using Bond Optic
- Be careful not to over sand
 - Other woods are much softer and very easy to over sand the wood and make surface uneven

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- Non-mesquite I try very hard to not get cracks by prepping wood
 - Cut out pith based on balanced blank
 - Center blank around pith
 - Avoid blanks with major branches
 - Trunk stock typically more stable
 - Rough turn bowls, seal end grain, paper bags, dry
 - Done ASAP
- Never store wood in log form
- Dry wood! Would not attempt to inlay wet wood, even mesquite I turn, let sit before doing inlay
- Surface resist only minimizes problem, really have to be careful with CA quantity used. Surface resist works fairly well with epoxy bleed

Resources

- Rotary tools – Dremel, Harbor Freight,
- Angle drill, Sanding Madrels – TheSandingGlove.com
- Sandpaper – Turningwood.com
- Cutters – RotaryChisel.com (CT101B), Amazon (Dremel)
- West System epoxy, pumps, fillers – Amazon, Marine supply
- Bond Optic epoxy – RareEarthTrading.com, AgatesAnonymous.com
- AWS-100 scale – Amazon
- CA glue – starbond.com
- Kwik-Frame accelerator - TheSandingGlove.com, Amazon
- Man-made turquoise – Tuckersturnings.com
- Real turquoise and stone – DennisLiggett.com
- Powdered metals – Ebay, woodturnerscatalog.com
- Dyed sawdust - TheSandingGlove.com, Key filings – Home Depot

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- Rotary tool
 - Dremel – Amazon, Home Depot, Lowes
 - Off brand – Amazon, Harbor Freight
 - Micro air die grinders – Amazon, Harbor Freight, Northern Tool
- Angle drill, sanding mandrels for sanding – TheSandingGlove.com
 - Can get similar from Amazon, but TheSandingGlove.com tests all his drills before selling them
 - WoodturnersWonders.com also sell angle drills
- Good quality disc sandpaper, you will need 80 grit and up – Turningwood.com
- Various cutters
 - CT101B cutter – RotaryChisel.com (Creative Technologies)
 - They also have other cutters
 - Dremel 9909 – triangle carbide cutter – Amazon (Lowes and Home Depot carry a bigger version that you don't want)
 - Dremel 194 – 1/8" high speed cutter – Amazon, (Lowes and Home Depot sometimes carry these)
 - Dremel 115 – 5/16" high speed cutter – Amazon, Lowes, Home Depot
 - Dremel 193 – 1/16" high speed cutter - Amazon
 - Various ball cutters – Amazon

- Freedom Typhoon bits (or similar) - most woodcarving suppliers
 - Check almost any woodcarving supplier for a variety of bits
- West System Epoxy, pumps and 407/410 fillers – Amazon, West Marine
 - Spend the extra money and buy the pumps, makes measuring easy
- Bond Optic epoxy
 - Agates Anonymous – agatesanonymous.com
 - Highland Part Lapidary – hplapidary.com
- AWS-100 Digital scale - Amazon
 - There are a couple of variation of this scale, the basic one I use is about \$11
 - If get something else, it needs to read to hundredths of a gram
- CA glue – Starbond (CPH International) starbond.com
 - You get free micro tips for the glue bottles
 - Starbond are typically at major symposiums
 - If doing lots of inlay, buy the 16oz bottles
- Aerosol CA accelerator
 - Kwik-Frame is best and fastest I've use
 - TheSandingGlove.com
- Man-made turquoise – tuckersturnings.com (formerly WalstonWoodworks.com)
 - I suggest buying powder, medium, and chips separately. He sells a blend of all three, but you don't use chips everywhere and the bag settles so mix doesn't stay mixed.
 - Sold in 1 pound bags. Find a friend and split it.
 - Also sells copper powder
- Real Turquoise and other crushed stone – Dennis Liggett, DennisLiggett.com
- Other powdered metals – WoodturnersCatalog.com, Ebay.com
- Other inlay material
 - Brass filings – Try Home Depot and Lowes at their key makers
 - Dyed sawdust – TheSandingGlove.com
- Check StephenHatcher.com, he has resource list of other inlay products