DETROIT AREA WOODTURNERS CASTING DEMO

Presented by Ben Shipman
Introduction

- Equipment/PPE
- Resin types
- Color Theory
- Pigment/Mica Selection
- Pouring/mixing
- Embeds
- Current Work
- Sanding/Finishing
EQUIPMENT-BARE MINIMUM

- Resin
- Activator
- Mold
EQUIPMENT - WHAT YOU REALLY NEED

- Colorants (Mica/Pigments)
- Pressure pot*
- Scale*
- Non-waxed Cups
- Mixing device
- Various sized molds
- Embeds
EQUIPMENT-PPE

- Safety Glasses
- Latex or nitrile gloves
- Respirator
RESIN TYPES

- Polyester Resin (PR)
- Alumalite
- Epoxy resin
POLYESTER RESIN

**Pros:**
- Long Pot life
- Inexpensive
- Stick to itself
- Easy to get local
- Can be used without a pressure pot

**Cons:**
- Odor
- Not best choice for certain embeds
ALUMALITE/EPOXY RESINS

Pros:

- Short time to finished product
- Great for embeds
- I believe some effects work better with Alumalite (see first con)

Cons:

- Short pot life
- Expensive
- Does not bond to itself
- Need pressure pot
- Must mix by weight
COLOR THEORY

- Primary Color - Red, Blue, Yellow
- Secondary Colors – Mix of Primary colors (Orange, Purple, Green)
- Tertiary Color – Mix of primary and secondary colors
COMPLEMENTARY COLORS
SPLIT COMPLEMENTARY
ANALOGOUS COLORS
COLOR MOODS
BLACK & WHITE

- Don’t forget black and white
- They can add depth and contrast
- Use white to tint your colors making them lighter
- Use black to shade your colors making them darker
MIXING

- Can add mica to resin or pour resin over mica
- Slurry-Small amount of resin with mica to break up mica globs
- 2 oz will make a ¾ inch round blank a little over 5 inches
- Do not worry about bubbles if using a pressure pot
- With no pot use vibration to shake out bubbles (ie, bandsaw, beltsander, or scrollsaw)
POURING TECHNIQUES

- Two hand swirl
- Spinner
- Glop
- Stir stick
- Layer’s
PRESSURE VS. VACUUM

- Pressure crushes bubbles
- Vacuum pulls air out
- Vacuum also pulls out water in woods which is bad for resin
- Pressure forces resin into cavities
- Pressure works fast while vacuum is slow
EMBED’S

- Pinecone’s
- Stamps
- Wood/Burl’s
- Metal’s
- Whatever you can imagine
FINISHING

- Must sand resin to a very high grit.
- MicroMesh pads go up to 12k grit.
- Use buffing wheel if you have it.
- I buff after 4800 Grit MM
- Sand after each grit with lathe off against the “grain”
THINGS THAT WILL GO WRONG

- Too much activator makes a brittle blank
- Temperature - hot will cure a lot faster than in cold weather
- Resin stuck in mold
- Leaky Molds
- Forgetting activator
- Gel Glob
HOW CAN YOU ADD RESIN TO YOUR TURNINGS

- Embedded woods
- Pierced items that are then filled with resin
- Clear resin can be used to cover things or seal them
- Finials
EXAMPLES OF RESIN TURNINGS:
LARGE MICA FLAKES AND KOA WOOD
COLORED PENCILS
BOOKS
STICKS
HOLEY BURL!!
STONE WITH RESIN
GOLD FOIL WITH RESIN
VARIOUS BLANKS I CAST
BURL DOUBLE CAST AFTER A BLOW OUT
COPPER WIRE EMBEDDED
CLEAR CAST OVER PAINT
MESQUITE EMBED WITH MULTIPLE COLORS
LINKS

- http://www.uscomposites.com/ Silmar 41 polyester resin
- http://www.alumilite.com/
- http://www.smooth-on.com/ mold and resin source - local also
- http://www.woodnwhimsies.com/ resin source
- https://nurturesoap.com/ - Mica and pigment source
- http://www.tkbtrading.com pigment’s
- Michaels/Hobby Lobby