


# DETROIT AREA WOODTURNERS CASTING DEMO


*Presented by Ben Shipman*

A decorative graphic consisting of several parallel white lines of varying thicknesses, slanted diagonally from the bottom left towards the top right, set against a blue gradient background.

# 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
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

# RESIN TYPES

- Polyester Resin (PR)
  - Alupalite
  - Epoxy resin
- 
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# 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 Alomalite(see first con)

## Cons:

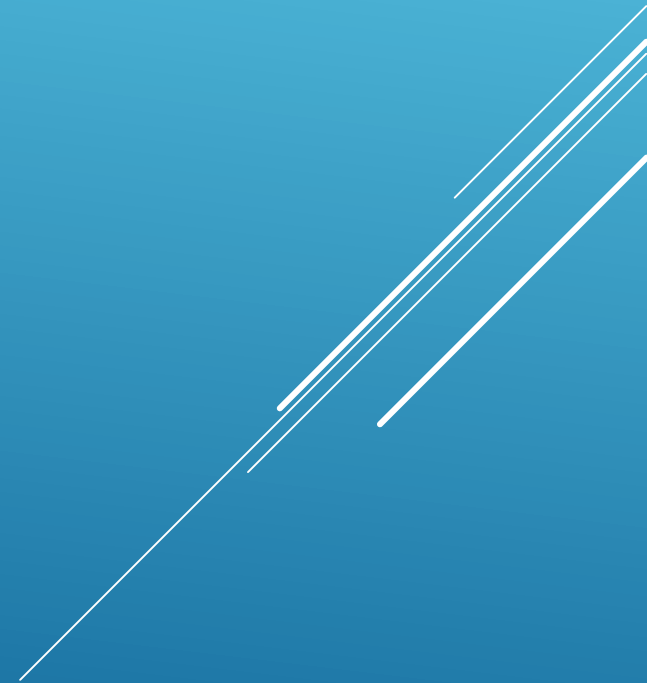
- Short pot life
  - Expensive
  - Does not bond to itself
  - Need pressure pot
  - Must mix by weight
- 



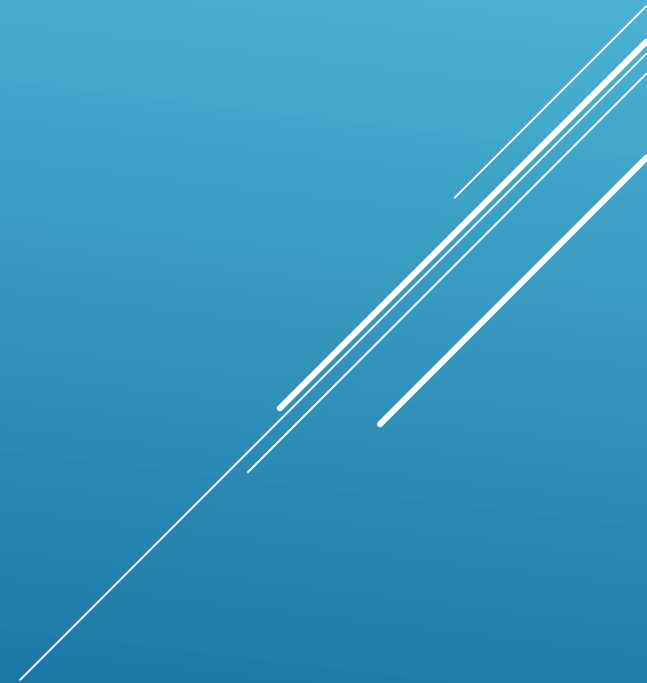
# COLOR THEORY

- Primary Color - Red, Blue, Yellow
  - Secondary Colors – Mix of Primary colors (Orange, Purple, Green)
  - Tertiary Color – Mix of primary and secondary colors
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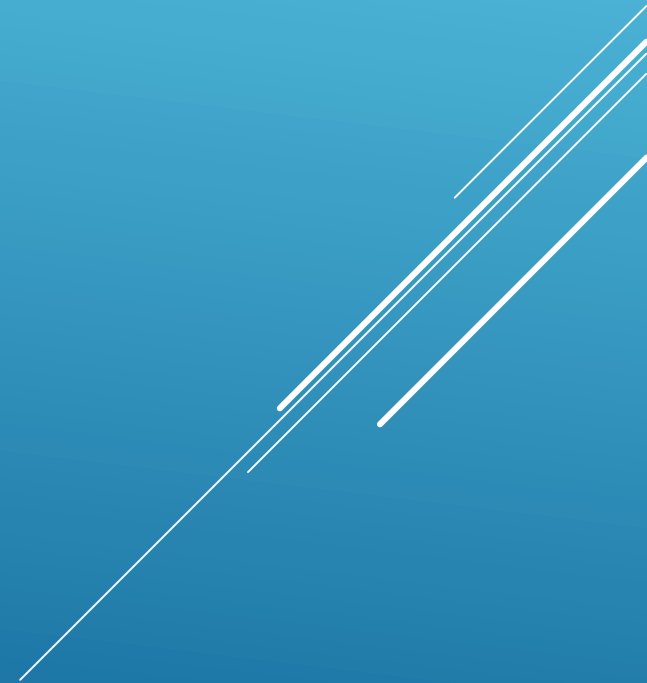
# COLOR WHEEL



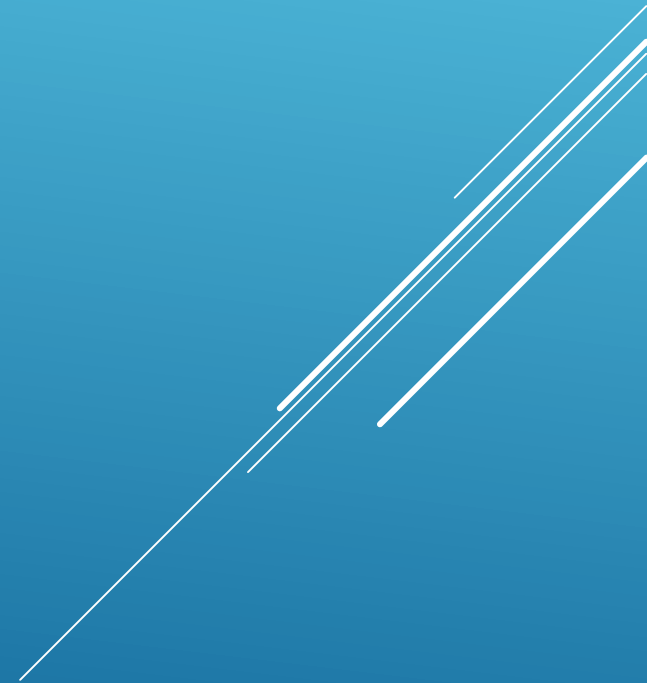
# COMPLEMENTARY COLORS



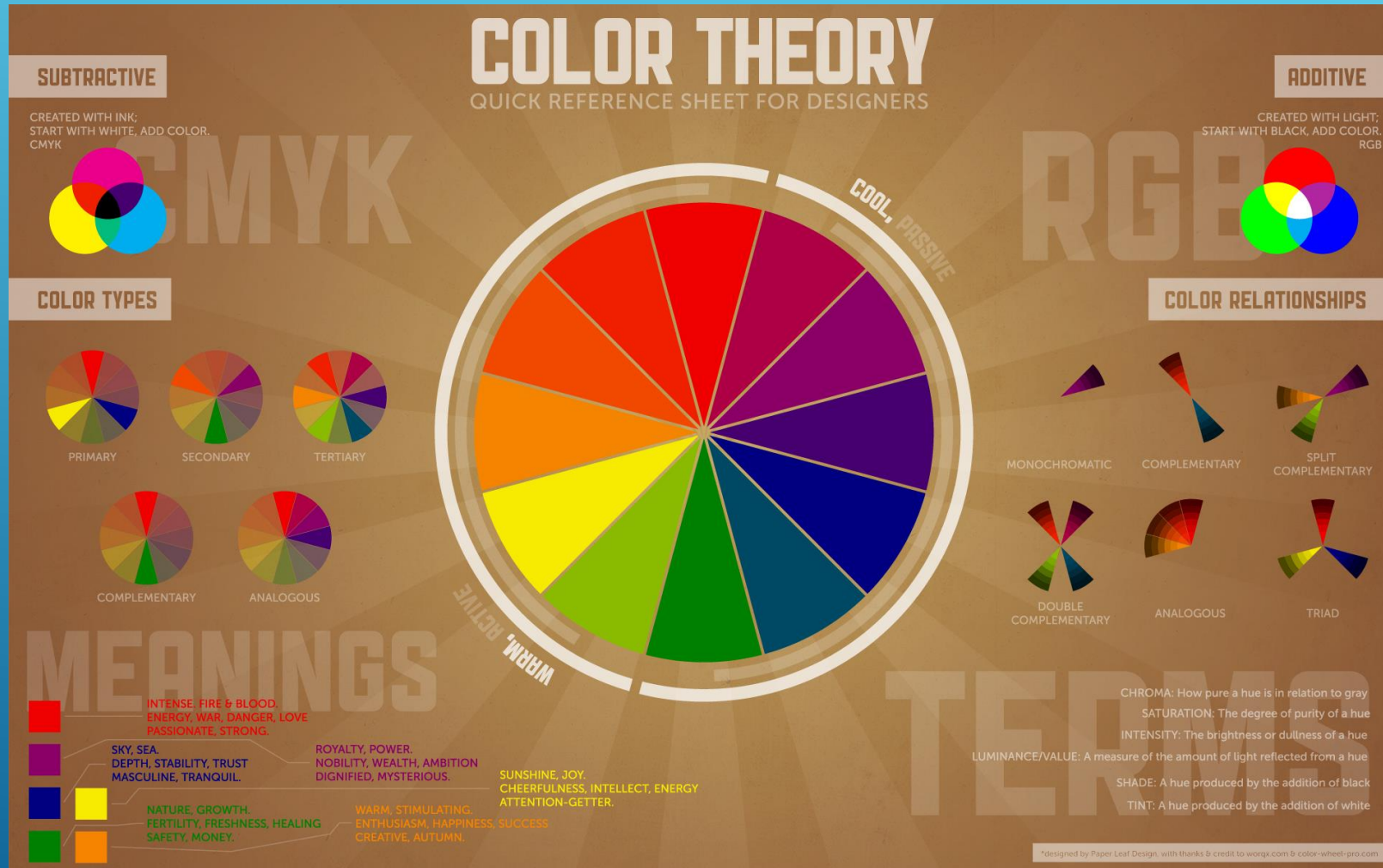
# SPLIT COMPLEMENTARY




# 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
- 
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# 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  $\frac{3}{4}$  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
- 
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# 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
- 
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# EMBED'S

- Pinecone's
  - Stamps
  - Wood/Burl's
  - Metal's
  - Whatever you can imagine
- 
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# 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”
- 
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# 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
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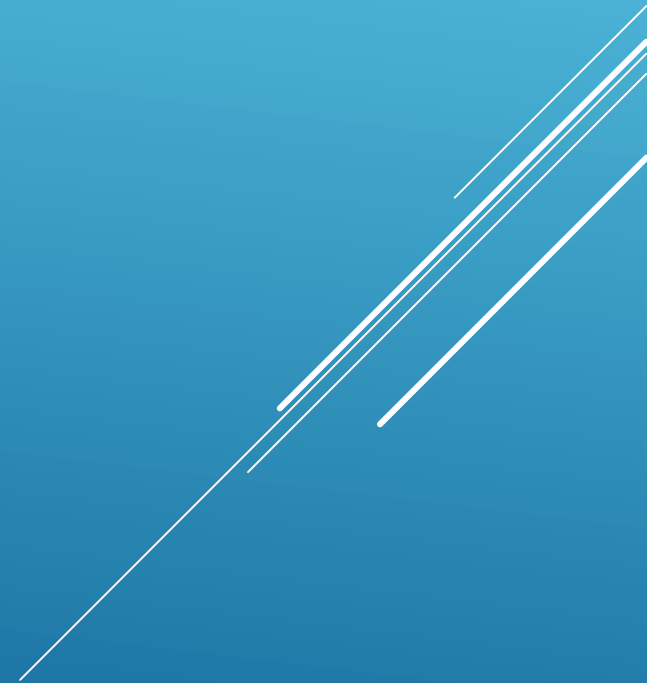
# HOW CAN YOU ADD RESIN TO YOUR TURNINGS

- Embedded woods
  - Pierced items that are then filled with resin
  - Clear resin can be used to cover things or seal them
  - Finials
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EXAMPLES OF RESIN TURNINGS:

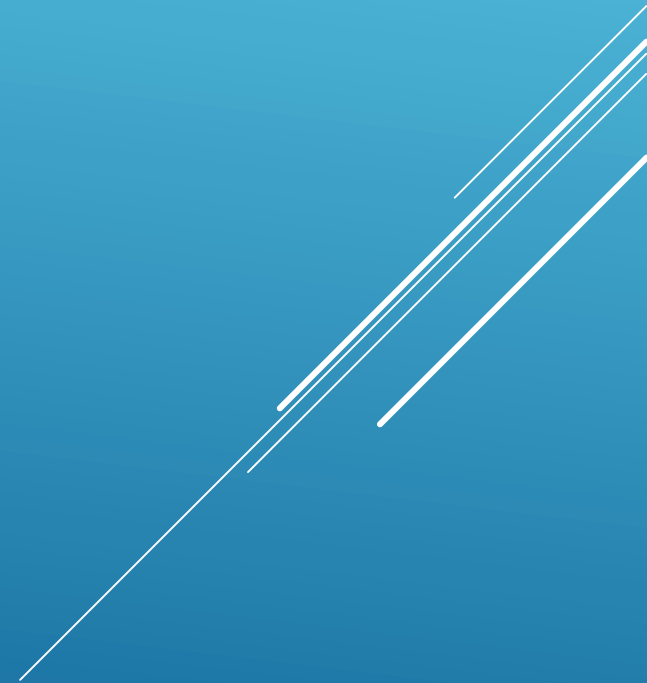


# LARGE MICA FLAKES AND KOA WOOD

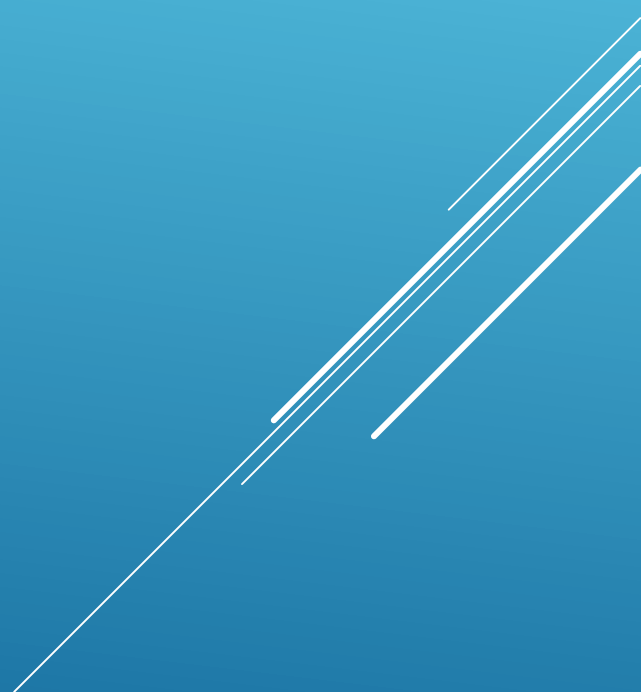




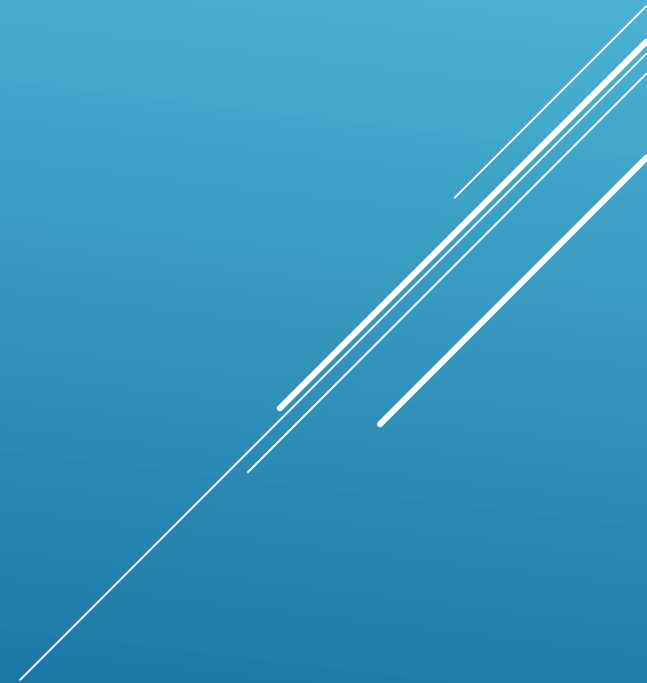
# COLORED PENCILS



# BOOKS

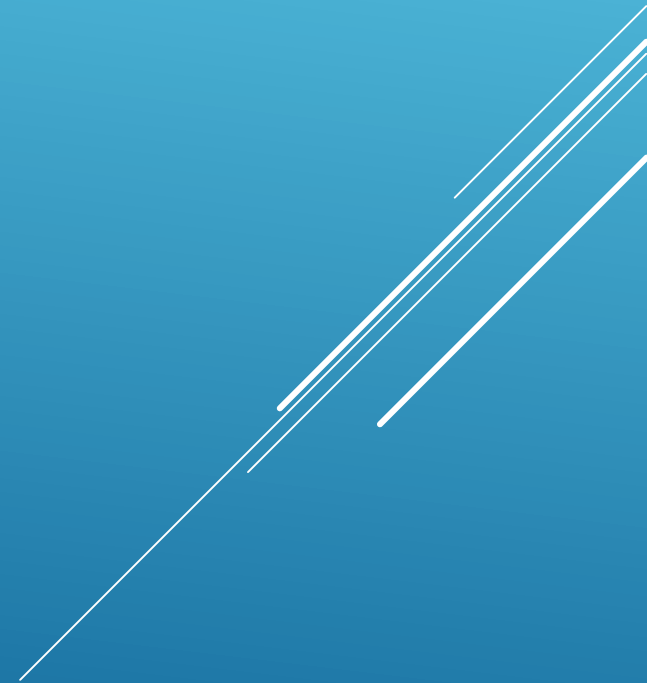


# STICKS





# HOLEY BURL!!

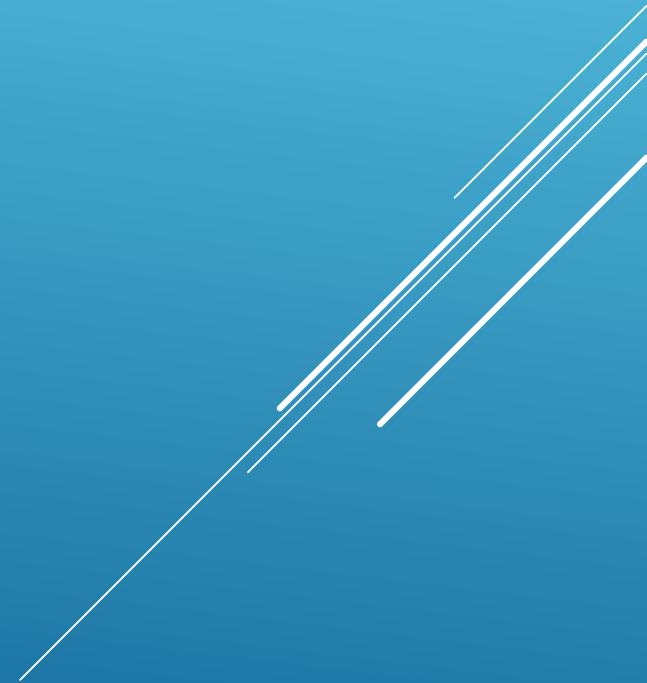






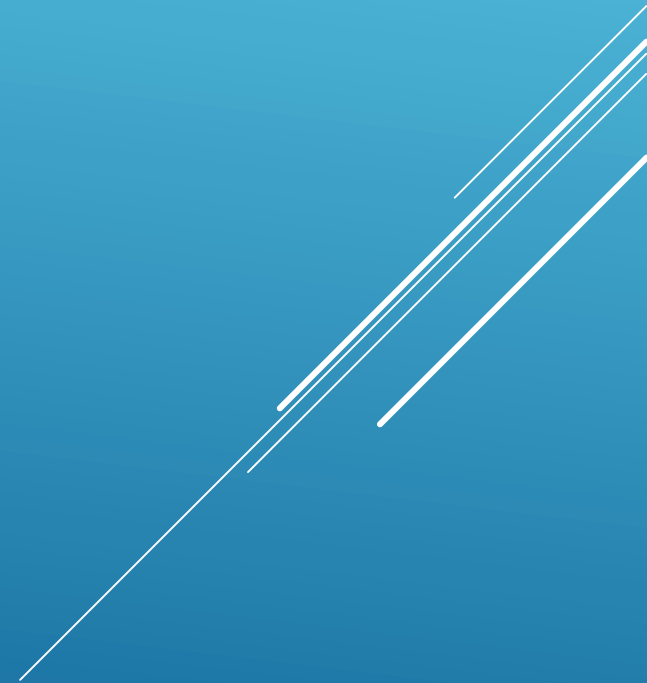


# STONE WITH RESIN





# GOLD FOIL WITH RESIN



# VARIOUS BLANKS I CAST



# BURL DOUBLE CAST AFTER A BLOW OUT

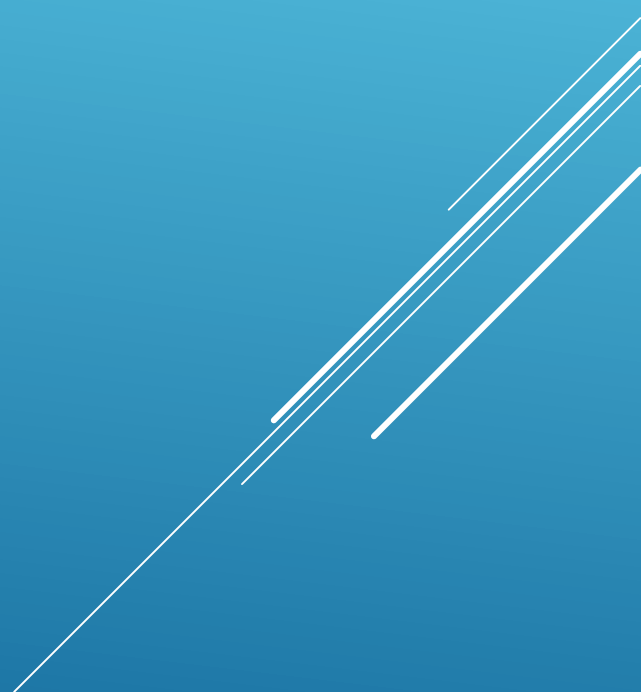


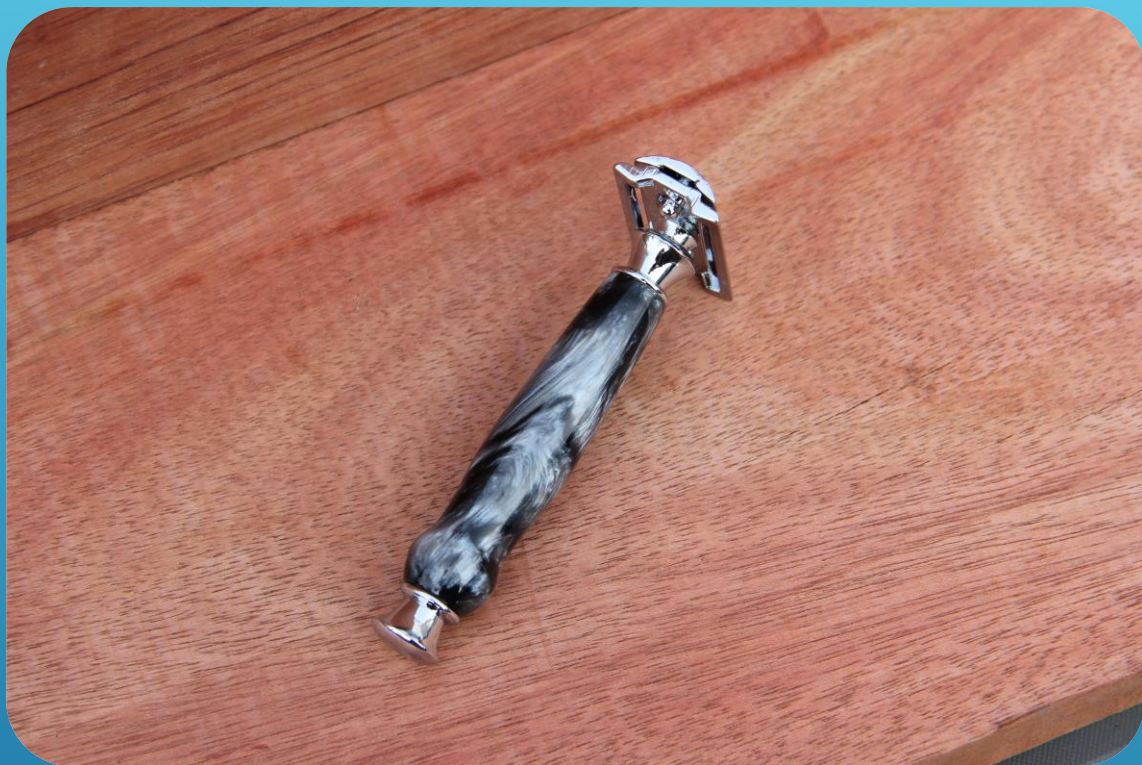


# COPPER WIRE EMBEDDED



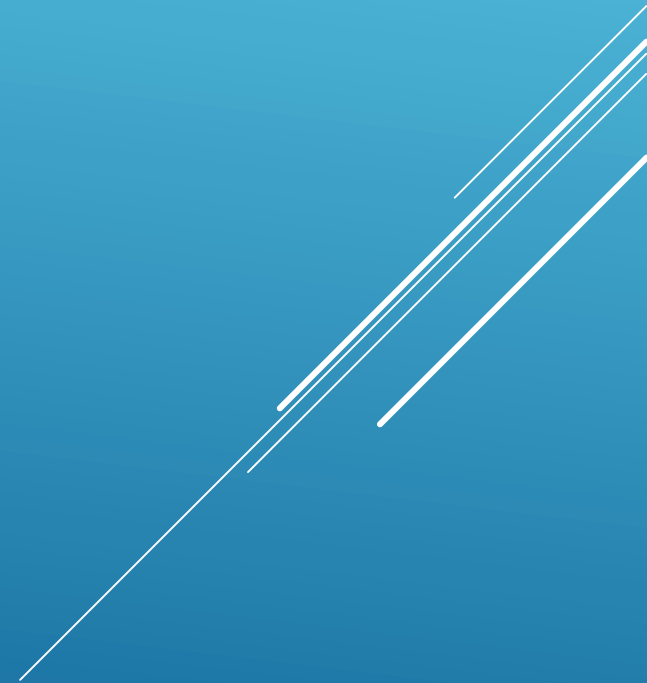
# CLEAR CAST OVER PAINT







# MESQUITE EMBED WITH MULTIPLE COLORS



# FORDITE EMBED





# 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
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