

# SHOP USAGE

## Material Guideline

### Woods used in the Guild Shop

#### Lumber Yard Wood

This is typically dimension-ed hard or softwood that has been purchased at one of the local lumber or big box stores (Lowe's, Home Depot). Because of the extensive processing, this wood goes through and the many safety checks for metal and the processing for moisture content, this wood is considered acceptable for use in the shop as is. The most common issue is staples, usually attached to end grain, to denote the product or pricing. A quick visual check will generally take care of this issue. If in doubt use the metal detector. The other issue is softwoods stored outside that can have high moisture content. See below for the treatment of wet woods.

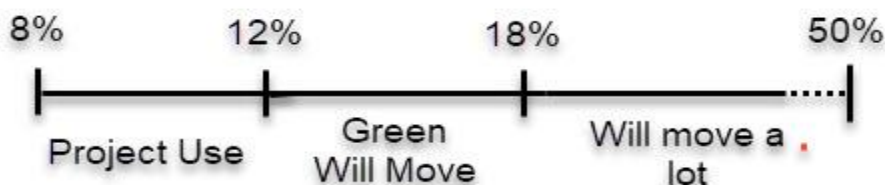
#### Green/Wet Wood

Green wood is any wood that has not gone through a proscribed drying process either air drying or kiln drying to reduce the overall moisture content to below 15% for air dried and 8% for kiln dried.

Wood is hygroscopic, which means it will absorb moisture. If the wood is stored outside or in an uncontrolled environment (not heated or moisture controlled), it will absorb moisture. Even if a board has been kiln dried, if it is stored outside in the rain it will reabsorb moisture. Most construction grade softwoods are minimally kiln dried, and then stored outside open to the elements. If you are using these woods be sure to check the moisture content. Both for your safety and your project's success. We consider any wood with a moisture content greater than 16% to be green/wet wood.

When a tree is initially cut, the logs have moisture content in the 35% and above range. The optimal range for furniture makers is 8-12%. The lower the better. Some people may want to work with semi-dry wood in the high teen range to take advantage of character achieved as it dries. Re-sawing a green log into slices and then drying them over time is a popular use of a band saw.

The table below explains why moisture content is so important. Since wood will expand and contract with changes in moisture content (wood movement), it is best to use wood in the 8% moisture range for stability in our homes.



Cutting Green wood causes two primary problems with equipment. First, there is a rust problem, moisture and steel make rust. Second wood that has not gone through a good drying process and/or has an excess of moisture/pitch, will deposit itself on the blades as the moisture is evaporated due to the heat of the blade going through the wood. This makes for a blade that is quickly dulled and runs hot.

In addition to issues with moisture content, Green wood often has another problem. Most green wood easily available today usually comes from urban or rural environments, not old growth forests. Many of these trees were used as fence posts, poster boards, tree houses, and target practice, and often have metal in them in the form of nails, staples, or bullets. These pieces of metal can destroy a saw blade or the knife on a planner or joiner.

### **Procedure for using Green/Wet wood in the Guild Shop**

Users need to recognize that processing Green or wet wood takes more time than processed wood and take that into account when planning projects.

- All softwoods should be considered wet until checked on the moisture meter.
- All wood must be free from dirt and debris, this may mean that you need to pressure wash, and/or wire brush the wood before bringing it to the shop.
- Check in with the Shop Attendant, to ensure that the wood is sufficiently cleaned.

The shop attendant will also assist you in measuring the moisture content of the wood and using the metal detector to check for metal. The Shop Attendant will also discuss with you what processing you want to do with the wood, and what machines you plan to use. Because of the machine impact of green/wet wood, the SA will help you set up and inspect the machine before you start.

Depending on the type of processing you are doing you may need to check for metal several times during the process.

If you do not know how to do these things check with the Shop attendant before starting.

The Shop Attendant will inspect the machine afterward to ensure that it is cleaned properly, and no damage has been done before proceeding to another machine.

You use these machines at your own risk. If you set off a cartridge on the saw stop due to moisture or metal touching the blade you will be charged for the Cartridge and the cost to repair or replace the Blade. If you hit metal with any of the machines it will be a \$150 charge for machine repair.

### **Recycled/Reclaimed Wood**

We consider Recycled or reclaimed wood to be any dimensional wood that has been previously used in any previous project or construction. It can be personally scavenged or purchased from a used lumber or wood dealer. If it is not a dimensional wood it will be treated as Green/Wet wood. Recycled/Reclaimed wood (Recycled wood) has all the problems that Green/Wet wood has plus some additional issues. Recycled wood is most likely to have nails or pieces of nails that have broken off or been missed. Often the wood has been painted. Sometimes wood preservatives have been used.

### **Procedure for using Recycled/Reclaimed Wood in the Guild shop**

Users need to recognize that processing Recycled/Reclaimed wood takes more time than processed wood and take that into account when planning projects.

- All wood must be free from dirt and debris, this may mean that you need to pressure wash, or wire brush the wood before bringing it to the shop.
- All paint must be removed before bringing it to the shop if you are going to machine the wood.
- No sanding of painted wood is allowed in the shop.
- No wood that has been treated with chemicals is allowed. E.g. Creosote, Copper Sulfate. Etc.
- No Pallet Wood – Often treated with harsh chemicals and lots of nails. It is normally junk wood.

Check in with the Shop Attendant, to ensure that the wood is sufficiently cleaned.

The shop attendant will also assist you in measuring the moisture content of the wood and using the metal detector to check for metal.

The Shop Attendant will also discuss with you what processing you want to do with the wood, and what machines you plan to use. Because of the machine impact of Recycled/Reclaimed wood, the SA will help you set up and inspect the machine before you start.

Depending on the type of processing you are doing you may need to check for metal several times during the process.

After you have finished using the machine you are expected to clean the machine remove any moisture, and clean the blade. If you do not know how to do these things check with the Shop attendant before starting.

The Shop Attendant will inspect the machine afterward to ensure that it is cleaned properly, and no damage has been done before proceeding to another machine.

You use these machines at your own risk. If you set off a cartridge on the saw stop due to moisture or touching the blade you will be charged for the Cartridge and the cost to repair or replace the Blade. If you hit metal with any of the machines it will be a \$150 charge for machine repair.

### **Instructions for SA's**

Moisture content is most important for the Saw Stop. Moisture content above 18% requires that you use the bypass mode on the Saw stop. Be sure to watch the user to ensure that they are capable of using the saw in this condition.

Metal detection should be used before each cut on Green or recycled woods.

- jointer/planner. These machines take off 1/16" or less on each pass and metal detectors have no problem in detecting metal to this depth. Each pass on these machines needs to have the board checked.
- Band saw – Check before cutting – wand the whole piece, both sides.
- Table Saw – metal and moisture will activate the beak cartridge. The metal wand should detect down an inch but still, both sides should be checked for safety even if it is only ¾" stock.

Checking the machine means checking all surfaces for moisture or pitch, and checking all cutting surfaces for nicks, or impact damage.