

Exterior Stain 101

THE BASICS



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Stain Characteristics

PRESERVATIVE
WATER REPELLENT PRESERVATIVE
WATERPROOFING SEALER
WATER REPELLENT
FINISH
SEMI-TRANSPARENT STAIN
EMULSION
SOLID HIDING STAIN
TONER
PENETRATING OIL
FUNGICIDE PAINT
OIL-BASE
DEW-CIDE
WATERBASE
CLEAR
WATERBORNE
SOLVENT BORNE
In-Can Preservative
FILM-FORMER
SIDE
Oil
ALKYD
Acrylic
Varnish
HIGH SOLIDS
VOC COMPLIANT

I'm Confused!

But its really this simple!



Do This...



To Prevent This...

Research shows consumers feel intimidated when faced with exterior wood care and consider this a complicated high risk project.

Why Stain Exterior Wood ?



**TO MAKE
WOOD MORE
BEAUTIFUL !**

&

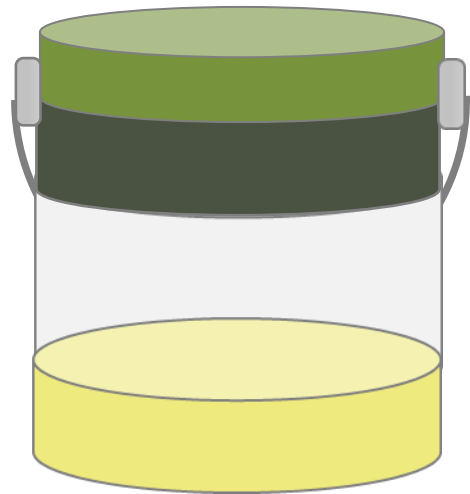
**TO PROTECT WOOD
FROM MOISTURE &
SUN!**

Why is Staining Important?

- To beautify and protect wood from moisture, sun, and changes in temperature
- Moisture = Rain, Snow, Swelling, Rotting, Mold and Mildew.
- Sun = UV rays and Heat, which promote shrinking, cracking, graying, fading and warping
- Changes in temperature = expansion, contraction and damage to wood fibers

Why Stain

Stain ingredients...



ADDITIVES

i.e. MILDEWCIDES
FLOW ADDITIVES

PIGMENT

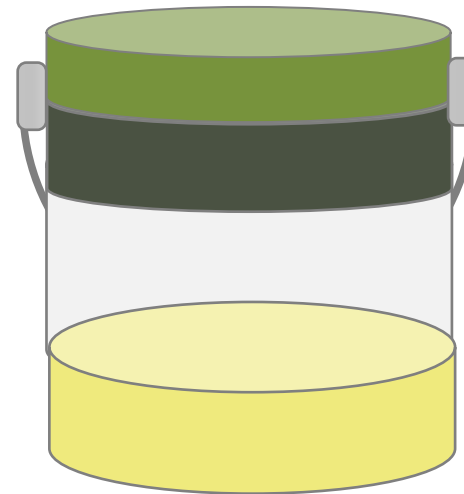
SOLVENT

WATER

BINDER/RESIN

ACRYLIC

Acrylic Stain



ADDITIVES

i.e. DRYING AGENTS,
MILDEWCIDES

PIGMENT

SOLVENT

MINERAL SPIRITS

BINDER/RESIN

ALKYD RESIN

Alkyd Stain

Depending on translucency pigments could include iron-oxides, trans-oxides, and organic pigments or combinations of all.



Stain Pigments

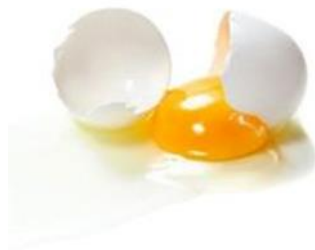
Stain Pigments

Pigments are used in stain to give an aesthetic beauty to wood as well as protect the wood from the harmful effects of the sun. Some stains contain Trans-Oxide pigments that give a cleaner more natural look than other stain products.



UV Protection



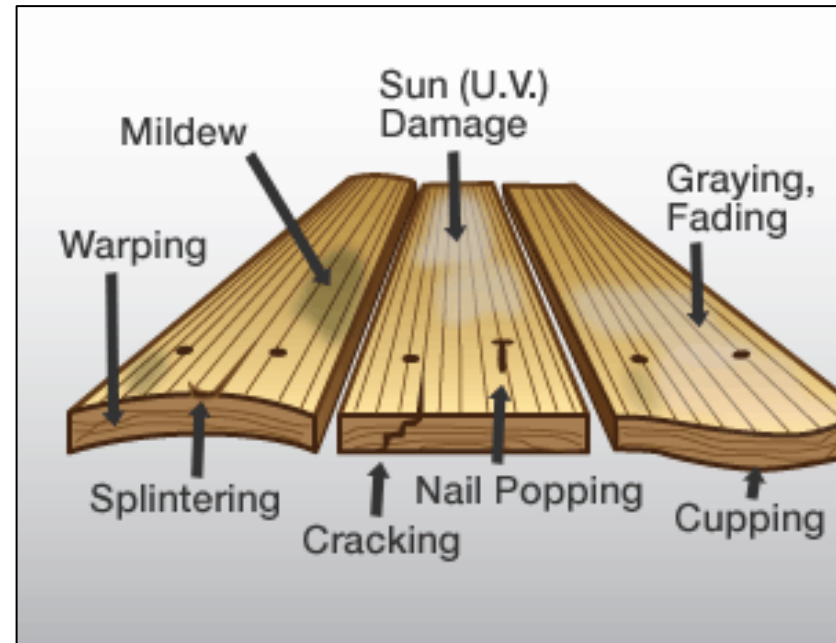


Binders

Binders

100% Acrylic, Hybrid, Alkyd/Linseed oil, and Waterborne Modified Alkyd are some of the different binders used in stains.

These binders are used in stain to help the stain penetrate deep into the wood, seal it, and give it durability.





Solvents

Solvents

WATER BASED (ACRYLIC)

Advantages	Disadvantages
Better UV resistance than oil	Shorter working time
Fast drying	Attention to application detail required
Soap and water clean up	

OIL BASED – SOLVENT

Advantages	Disadvantages
Longer working time	Fade faster than Acrylic products
Easier application	More susceptible to mold / mildew than water based products
	Hard to clean up – Slow drying



Additives

Typical Additives

Additives – low volume ingredients that aid in manufacturing, and add specific characteristics to the stain

Paraffin wax – adds extra scuff protection & water beading

Mildewcides – prevent mildew from growing



Water – Beading

Stain Finish Characteristics

PRODUCT TYPES

CLEAR

Natural finish, enhances wood appearance, weathers gray naturally.

TONER

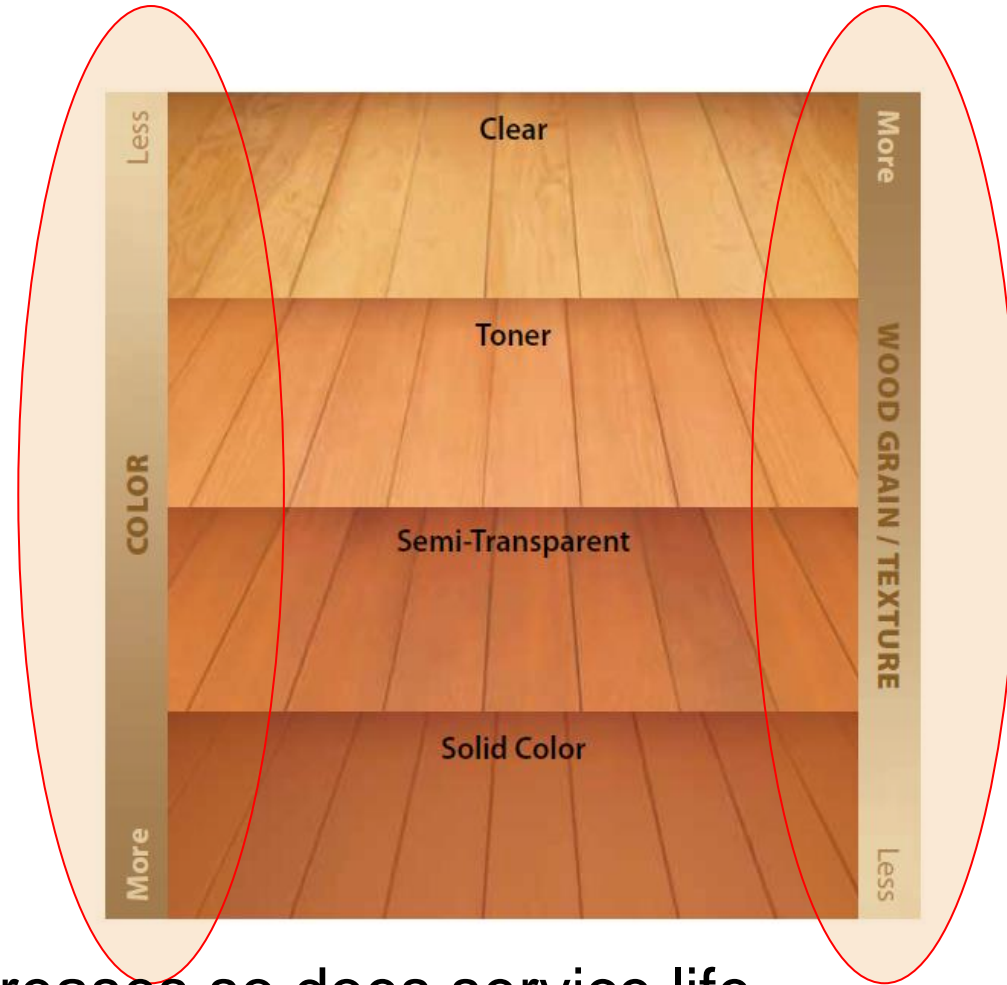
Slight hint of color, shows wood grain and texture.

SEMI-TRANSPARENT STAIN

Subtle color, shows wood grain and texture.

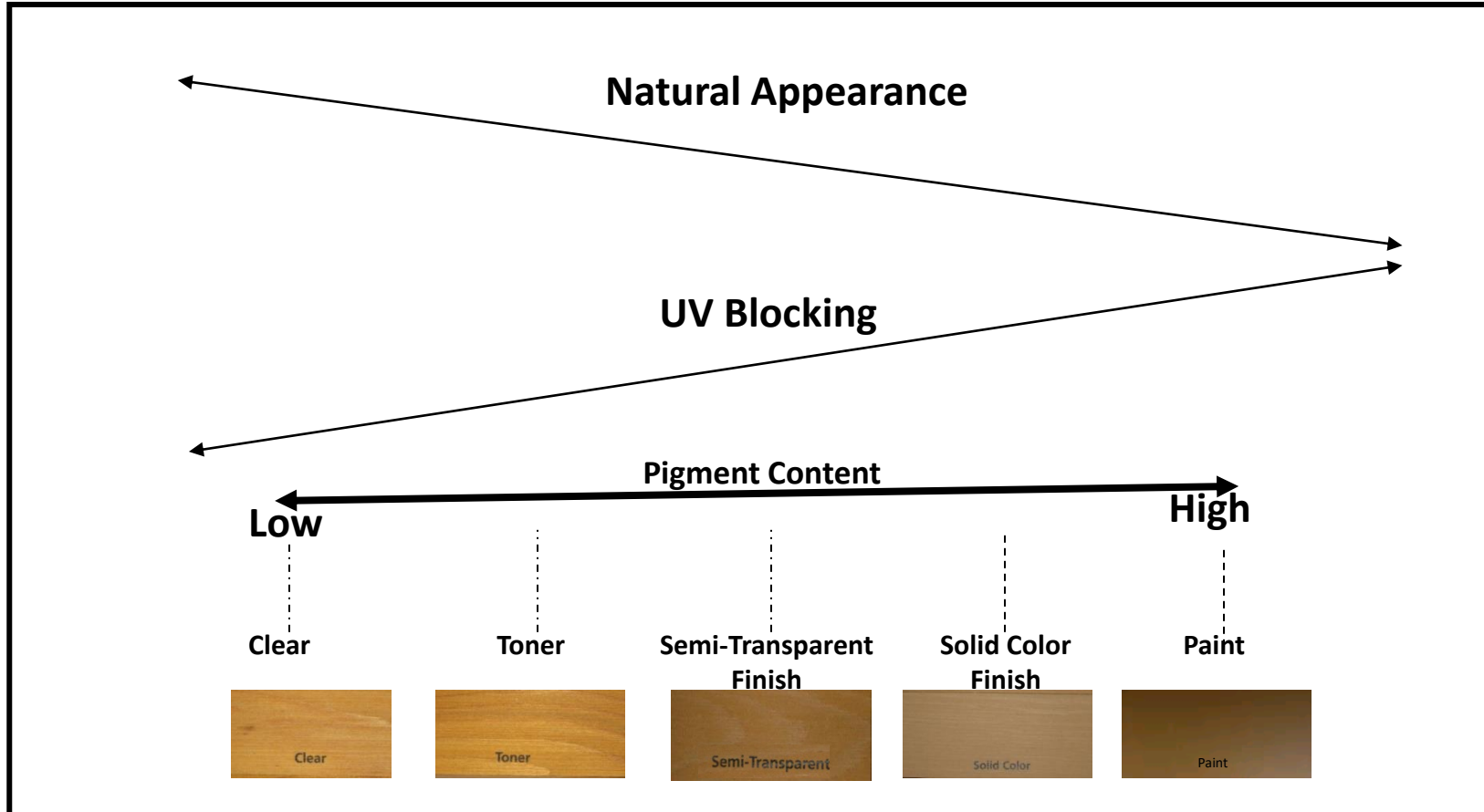
SOLID COLOR STAIN

Opaque color, shows texture (looks like paint).



As opacity of stain increases so does service life.
Semi-Transparent stains last longer than Toners.

Stain Type Finish Characteristics



The Nature Of Wood

New Wood Can Present Several Problems

New Exterior Grade Lumber Characteristics:

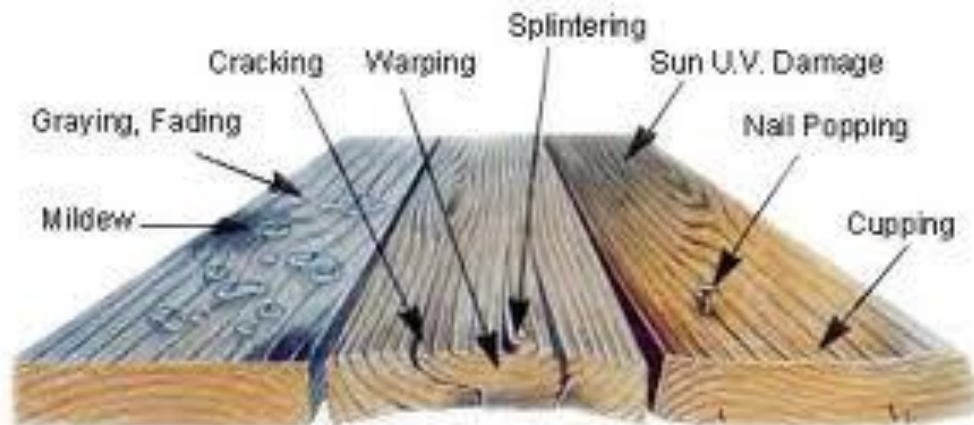
- Tree harvest & distribution to market is at record pace
- 30 % - 45 % Moisture content
- Natural extractives exudation
- Mill-Glaze
- Mildew



The Nature Of Wood

Aged Wood Surfaces Can Present Several Problems Also

- Wet & Dry Cycles = Contraction & Expansion Stresses
- Cracking, Splitting, Cupping, Warping, Splintering Etc.
- Eroded Pre-Existing Finishes or Sealers
- Mildew, Algae, Mold & Lichen Soils
- Natural Extractives Leaching
- Damaged or Decayed Wood



Is my deck suitable for staining?

A water test is the easiest way to ensure that the wood can absorb sealer or finish. Sprinkle water on the deck. If it soaks in immediately, the deck can be sealed. If the water beads up or stands on the deck your deck may not need sealing yet.

If the water beads on the surface and is not absorbed in ten minutes you need to either remove the old finish or wait to apply a new stain or sealant



Clean Surface Prior to Staining



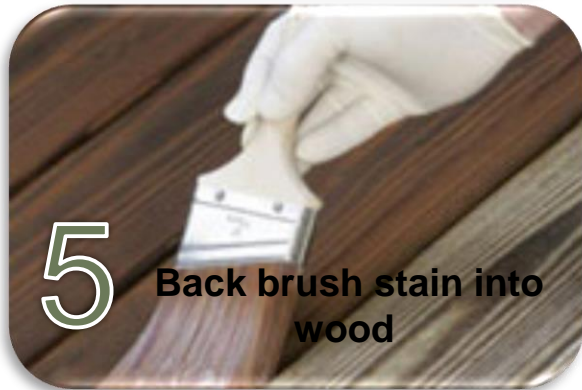
Results After Cleaning



Before

After

Ready to Start Staining



Completed Project

**ANY JOB
WORTH
DOING IS
WORTH
DOING
WELL.**



YOU
CAN
DO
THIS

Review

- **Staining a deck can be intimidating**
- **Stain consists of four main opacities**
 - Clear
 - Toner
 - Semi-Trans
 - Solid
- **All stains perform to different customer wants and needs**
- **Important to do a water test to make sure deck will accept stain!**
- **Prep is the key to success!**
- **Customer success is the key to repeat business!**