Quick-drying wood stains & finishes

-Wood stains which dry fast and foster good grain definition and can be used in the manufacturing industry.

There are several different types of wood stains currently available. The conventional lacquer stains are basically colored lacquers that dry very quickly and could be used for your fast turn-around schedule. A drawback of the lacquer stains, however, is that they do not penetrate into the wood fibers to provide good grain definition and if a finished piece is scratched through the finish, the bare wood will be exposed.

NGR alcohol stains are another type of quick drying finish commonly used on furniture; their liability is poor fade-resistance in direct sunlight. Conventional penetrating oil stains provide good grain definition and richness of color. However, most oil stains take a relatively long time to dry (up to 24 hours) before the subsequent sealer and topcoats may be applied. Otherwise you often get blushing and/or solvent entrapment, bubbles, in the sealer.

A recent formulation is an oil stain that combines the best properties of both lacquer and penetrating, oil stains. The new 15 Minute Oil Stains give penetration into the fibers of the wood surface, resulting in excellent grain definition and richness of color. Their working time is more than sufficient to obtain a uniform staining job when applied by wiping or brushing or spraying, followed by a wipe. Their fast release of solvents, however, allows the sanding sealer to be sprayed over the stained surfaces in only 15 minutes. These 15 Minute Oil Stains and finishes will allow you to complete your projects within your time constraints while providing you with a finished piece of substantial quality.
Heat gun

A heat gun is a device used to emit a stream of hot air. They are superficially similar in shape and construction to a hair dryer, though they run at much higher temperatures. They are often found in physics, materials science, chemistry, engineering, manufacturing and other types of laboratory or shop settings.

Heat guns can be used to dry and strip finishes, apply heat shrink tubing, apply shrink film, dry out damp wood, bend and weld plastic, soften adhesives, heat shrink wrap on packaging, and thaw frozen pipes. They are also used in electronics to desolder circuit board components. They typically output air at temperatures ranging from 100-550°C (200-1000°F) with some hotter models running around 760°C (1400°F). If lead paint is being removed, it vaporizes at 1000 F. Only low heat 400-600 F. is safe with lead paint since it doesn't vaporize the toxic lead. Heat guns have less control over the temperature. An alternative is speedheater infrared gun which emits infrared heat rays not blowing air at these lower, safe temperatures. It can perform all the same functions as a heat gun. Typical drying and curing times using a heat gun can be reduced by 90% in most cases.

Some heat guns incorporate a built-in rest, so they can be activated and placed on a workbench, which frees the operator's hand. Heat guns can have nozzles which deflect their air for various purposes, such as concentrating the heat on one area, or thawing a pipe without heating up the wall behind.

Most have a heating element based on electrical resistance but some produce heat by a gas flame. A fan increases and focuses air flow for convection heating.
IR Shrink Tunnel

A Shrink tunnel or IR Heat tunnel is a heated tunnel mounted over or around a conveyor system. Items such as packaging, have shrink film loosely applied; with heat, the film shrinks to fit snugly around the wrapped object. They can also be used to cure a finish on the surface of a product.

**Uses**

- Shrink labels
- Combining small items for sale and display (example: bottled water)
- Tamper resistant or Tamper-evident bands or seals
- Form large unit loads for transport
- Form primary barrier on foods such as cheese, meats and fish
- Cure and dry finishes on surfaces
- Skin packs

**Types**

The heat source can be based on Heating element (electrical resistance), Infrared heater (IR), steam, or gas flame. Often forced air is used to improve convection, sometimes focusing the heat on one component of the item.

Tunnels are available with or without a conveyor system. Some are built into a production line or are integral with machinery that also applies the finish. Others are movable by hand or by wheels. Some heat shrink tunnels have two or more zones for heating and controlled cooling. Drying, curing and cooling times are determined by the speed of the conveyor belt. A typical speed on an average conveyor belt could be around 1-2 minutes.

**Applications of infrared heaters (IR heaters)**

IR heaters are used in industrial manufacturing processes including curing of coatings, shrink tunnels, heating of plastic prior to forming, plastic welding; processing glass, and cooking and browning food. They are used when high temperatures are required, fast responses or temperature gradients are needed or products need to be heated in certain areas in a targeted way. Their application is difficult for objects with undercuts or hidden surfaces.
Pricing

Industrial Heat Gun : $280 - $350
Quick-Dry Wood Finish : $38 - $45 / Quart
IR Shrink Tunnel : $2,800 - $3,500
Standard Stains & Finishes : $5 - $8 / Quart