

## The conventional staining process.

Conventional application of stain is generally applied by a 'spray and wipe' process using **solvent base stains**.

The stain is sprayed on, wiped off, and then must dry. As a wiping stain, it must be formulated to **dry slowly**, or what is known as an open time, to enable time to wipe the stain evenly.

### **ADVANTAGES:**

- Wiping stains require relatively little training.
- Heavier pigments in these stains enhance the grain in open pore woods such as oak and hickory, producing a strong grain strike.

### **DISADVANTAGES:**

- Wiping stains on woods such as beech, maple and birch usually **require a pre-treatment to reduce blotchy results; this step adds additional labor and material V.O.C.'s**.
- From solid woods to veneers, **uniformity of color is not always even**.
- Application of a wiping stain **takes 3 – 4 times longer than spray only stains**.
- Dry times may vary from **45 minutes to several hours**.
- **Deep colors usually require an additional color step** such as a spray only pre-stain.
- Solvent base wiping stains are **the single highest exposure of bodily contact to toxic fumes**. Fumes are absorbed not only through the lungs, but also through eye membrane and the skin.
- Bleed back of stain from pores and crevices between frames and panels is a common occurrence **requiring the additional labor for re-wetting and removal**.
- Solvent base stains are toxic. **They are some of the highest in V.O.C.'s of all finishing products**.
- Wiping stains must be removed by hand; **rag marks and hand prints are inevitable, costing time and money to repair**.
- Solvent base stains **are not considered 'green'**.
  - ✓ Solvent base wiping stain rags **produce waste**.
  - ✓ Used rags are **flammable and a common reason for shop fires**.
  - ✓ **Rags leave behind cotton fibers in the wood**, which must be sanded out of the finish. Used rags **must be dried and disposed of carefully**.
  - ✓ **Much of the wiping stain is wasted**. As much stain is left in the rags as is on the wood.

**INDUSTRIAL COATINGS SOLUTIONS** offers many advantages to staining. We recommend setting up an in-house lab to make all stain matches. None of the products offered here will require any specialized equipment.

## **European water base stain technology or Hydro stains.**

### ***ADVANTAGES***

- Factoring in a spray application, and in-house color matching, staining cost in labor and material may be lowered by 30% or more.
- **Make only the amount of stain you need**, further cutting costs by minimizing waste.
- **Making the stain when you need it, 'on time'**, no longer relying and waiting on an outside supplier.
- Many existing colors can be matched with the Hydro stains.
- For Beech and Maples, European Hydro stain technology is considerably **more uniform than any wiping stain.**
- **In many cases, deep colors are achieved in one** step rather than two.
- Dry times of Hydro **stains are twice as fast** as the fastest wiping stain.
- Hydro stains are 'green'. **V.O.C.'s from staining would be virtually eliminated.**
- **Hydro stains achieve maximum uniformity** on difficult to stain woods such as Beech and Maple. Pre-treatment of these woods would be eliminated.
- Because wood is made with water, **Hydro stains have a natural relationship with wood, therefore are the most user friendly of spray stain applications.**
- Hydro stains are **compatible with most finishes.**

### ***DISADVANTAGES***

- Not all stain effects can be replaced with the Hydro stains. Open pore woods such as oak and hickory achieve maximum grain strike with wiping stains.

**NOTE:** Optional specialty colors may be offered with the use of Hydro stains as a pre-stain under solvent wiping stain. This achieves the deepest of colors with clarity, uniformity and definition.