

WHAT IS PAINT?

Paint is a term used to describe a number of substances that consist of a pigment suspended in a liquid or paste vehicle such as oil or water. With a brush, a roller, or a spray gun, paint is applied in a thin coat to various surfaces such as wood, metal, or stone. Although its primary purpose is to protect the surface to which it is applied, paint also provides decoration.



HISTORY EGYPT

- The Egyptians mixed their colors with some gummy substance, and applied them separated from each other without any blending or mixture.
- Ancient painted walls at Denerdera, Egypt, which were exposed for many ages to the open air, still possess a perfect brilliancy of color, as vivid as when they were painted about 2,000 years ago.
- They appeared to have used six colors: white, black, blue, red, yellow, and green. They first covered the field entirely with white, upon which they traced the design in black, leaving out the lights of the ground color. They used minium for red, and generally of a dark tinge.

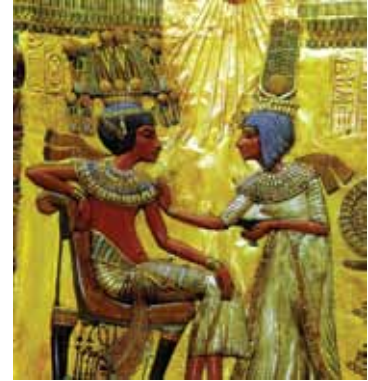


EGYPTIANS

- Paint was first used as a protective coating by the Egyptians, who applied pitches and balsams to the exposed wood of their ships.

- Around the middle age, artists began to boil resin with oil to obtain highly miscible (mixable) paints, and artists of the fifteenth century were the first to add drying oils to paint.

They also adopted a new solvent, linseed oil, which remained the most commonly used solvent until synthetics replaced it during the twentieth century.



20TH CENTURY

- The twentieth century has seen the most changes in paint composition and manufacture.

Today, synthetic pigments and stabilizers are commonly used to mass produce uniform batches of paint.

New synthetic vehicles developed from polymers such as polyurethane and styrene-butadene emerged during the 1940s.

Alkyd resins were synthesized, and they have dominated production since. Before 1930, pigment was ground with stone mills, and these were later replaced by steel balls.

Today, sand mills and high-speed dispersion mixers are used to grind easily dispersible pigments.

COMPOSITION OF PAINT?

Paint is described as a fluid composition with varied viscosity depending on application whether by spray, brush, roller...etc.

During its drying or curing process, paint becomes an impermeable, protective, decorative film.

The main components of this film are:

- Binders
- Pigments
- Extenders
- Thinners (solvents or water)
- Additives such as drier, anti-skin agents rheological agents, air-releasing agents and leveling agents...etc.

Binders:

Binders are the continuous phase of the paint film in which pigments and extenders are distributed. Binders produce the greatest volume of paint film and have the most influence on the characteristics of the paint regarding drying or curing in terms of adhesion, hardness, strength, resistance to chemicals...etc.

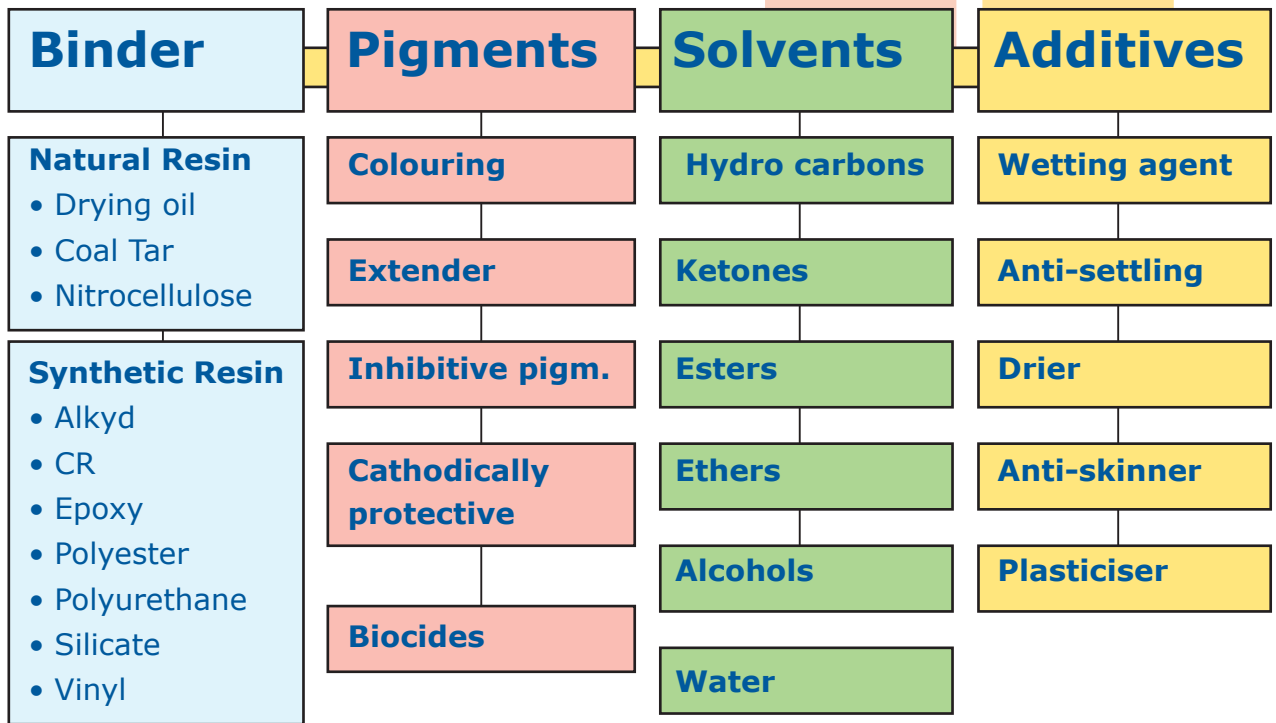
Pigments:

Pigments are the small particles of solid material, which are distributed in the paint colour and hiding capacity and protect the Binder against deterioration from the ultra violet rays of the sun.

Extenders:

Extenders are natural or synthetic minerals such as talc, clay, dolomite...etc. that are finely distributed in the paint. Particles have different sizes, shapes and textures and must be chosen and mixed in the correct ratio to ensure the best possible quality.

COMPOSITION OF PAINTS



WHAT IS THE DIFFERENCE BETWEEN A PAINT, A VARNISH AND A STAIN ?

