

### THE EFFECTS OF COLOR SELECTION ON PAINT COST AND PERFORMANCE

The choice of color can affect the outcome of a painting project in several ways, among them:

#### COST:

The effect of color on the cost of a painting project can be calculated in terms of both labor and material.

Top-quality paints contain titanium dioxide as the primary white pigment. Exterior grades of titanium dioxide are very durable and high-hiding. Particles of this pigment are dispersed throughout a paint film, and pack together to create an opaque barrier when the paint dries. Certain colored pigments when added to paint for the creation of color are naturally transparent. Examples of transparent paint pigments include Hansa Yellow and Perylene Red which are used to make bright yellows and pinks. When these transparent pigments are dispersed in paint, their particles become spaced between the particles of titanium dioxide. This reduces the opacity of the dried film. Essentially, this means that a can of white paint may provide one-coat hide or coverage, until an additional pigment is added which reduces the ability of the paint to cover or hide.

The ability of paint to hide or cover can also decrease as the depth of color increases. This is because less titanium dioxide pigment is used in darker colors, so the hiding power of the paint is more dependent on the colored pigments.

It is obvious that, if additional coats of paint are required to achieve complete coverage of a surface, there is an increase in both the cost of the material, and the price of the labor.

#### PERFORMANCE:

Some colored pigments are inherently more durable than others. The more durable pigments come from naturally occurring sources and are termed "inorganic." Less durable pigments are man-made synthetics and are termed "organic."

Organic pigments are used to create clean, bright colors, and are best used interior. Inorganic pigments create earth-tone colors and are suitable for use both inside and out. When a color is made using organic and inorganic pigments in combination, the color changes tone during weathering as the less-durable organic pigment fades at a faster rate than the more durable inorganic pigment.

Exterior paints tinted using organic pigments tend to fade at a considerably faster rate than those tinted using inorganic pigments. Only when a single organic pigment is used in deeper colors is the tendency to fade reduced. This is referred to as using organic pigment in a "mass tone."

Caution is advised when selecting colors when low cost and low maintenance is an issue. In general, it is best to avoid most shades of pink, peach, salmon, yellow, orange, yellow-green, lavender, purple, and light blue for exterior use. These colors are among those which tend to require more coats to cover, or fade faster, or both. Flex Bon personnel are available for assistance in selecting high-hiding colors which are durable for exterior use.

In addition to natural premature fading with organic pigments, another possible concern is alkali resistance. Certain organic pigments have been known to fade on masonry and stucco due to high pH. This is especially accentuated in our market area when high heat, ultraviolet rays and high humidity are present. It is important that masonry substrates cure at least the necessary time to achieve a pH of 10.0 or lower for best coating performance.