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The Main Differences Between Gloss, Semi-Gloss and Flat Coatings

Industrial Coatings Finishing Basics

Many different terms are used for the gloss level of an industrial coating. In the past, the terms flat, low sheen, semi-gloss, gloss and full gloss were used by manufacturers to describe the gloss level. Today, we have a number of additional descriptions which are used to describe the gloss levels that fall in between a traditional flat, low sheen, semi-gloss, gloss and full gloss. Terms such as eggshell, satin, and silk are common and usually reserved for decorative paints (house paint or interior paints), yet their use transfers to industrial coatings from time to time.

When determining the gloss you want to use for a particular project, an easy way to think about this is using the concept: the higher the sheen, the easier to clean.

"The higher the sheen, the easier to clean."

Gloss Terminology

Gloss is measured using a gloss meter by analyzing the amount of light reflected at a given intensity and angle. The higher the measured reflectance value, the higher the gloss. Take a look at the following chart:

Typical Gloss Terminology

Full Gloss 85% - 100%

Gloss 60% - 84%

Satin 20% - 59%

Matte 5% - 19%

Flat 0% - 4%

Gloss Coatings

Full gloss coatings contain the most amount of resin and enhancing surface imperfections is a negative impact of high gloss. The high gloss surface is much smoother and is the most resistant to abrasion when being cleaned. While a gloss coating tends to enhance surface imperfections, they are more durable and are resistant to staining and dirt pickup.

Gloss is directly related to the PVC (pigment volume concentration) of the product. As the percentage of the pigment in a coating increases, the gloss level decreases. The lower the percentage of pigment in the coating, the higher the gloss will be.

Flat Coatings

Flat coatings diffuse light and help to hide surface imperfections. Due to the pigment that scatters the light and protrudes through the surface of the coating, these coatings are more prone to dirt pickup and staining. Flat coatings are also easily abraded away when washed because of the particle protrusion through the surface and they can be easily touched up because of the scattering of light helps to hide imperfections.

Typically, flat products are used in areas that are not exposed to a high degree of dirt or staining compounds, reducing the amount of cleaning required and extending the life of the coating.

Satin or Semi-Gloss Coatings

Semi-gloss coatings contain more resin (binder) and less pigment than a flat coating. Semi-gloss coatings bring improved resistance to stain, dirt pickup, and have a higher resistance to abrasion than a flat coating.

With industrial coatings, gloss level also affects color perception; the same color can vary across multiple gloss types. The color in higher gloss coating appears brighter and richer than the same color in lower gloss coating. Gloss level ultimately affects the product's final appearance so the importance of considering the differences between gloss, semi-gloss, and flat coatings impact your company's bottom line.