



FACTORS AFFECTING COLOUR STABILITY IN ACRYLIC COATINGS

Acrylic formulations are complex systems comprised of ingredients that are interdependent and in a delicate balance. Numerous factors can affect their colour stability and cause premature fading. Some of these factors are: pigment nature (organic or inorganic), pigment loading and environmental conditions.

FACTORS INCLUDE:

- In general, organic pigments are more susceptible to fading than the inorganic ones. They can degrade due to a photo-oxidation reaction catalyzed by the UV radiation in combination with high moisture. The compatibility of these pigments with other ingredients in a formula presents a major challenge for most coatings developers.
- High pigment loadings used for very dark shades may be detrimental to colour stability. As the pigment loading increases, a situation can occur, in which the film becomes over-saturated with pigment leaving under-bound particles that have the potential to migrate. Our intensive testing resulted in several significant findings, which will place Imasco in an advantageous position with the possibility of using higher pigment loadings than in the past, without affecting colour durability.
- Environmental conditions, such as proximity to water and direct sunlight exposure, are known to influence the colour stability in general. In these instances, colour change can occur through pigment loss from the superficial layer of the coating and through the photo-oxidation of organic pigments.

If further information is required please contact your IMASCO representative.

Contributed by:

Imasco Minerals' Quality Assurance Department