Volatile Compounds in Resins with Halogen Moisture Analyzer

Asian Paints, the Indian market leader for paints, attempts to increase the solid content in paint formulations thereby decreasing the need for solvents. New resins need developing to ensure the performance of such high-solids paints. Halogen moisture analyzers from METTLER TOLEDO ease the research work as they quickly and accurately determine the volatile contents in resins with reproducible results.

Increasing Solid Contents in Paint
Asian Paints, India’s largest paint company, maintains 29 manufacturing facilities producing pigments, binders and solvents and serves consumers in over 60 countries with paints for decorative and industrial use. The R&D centre in Mumbai currently focuses on resins that make it possible to manufacture high-solids paints with a decreased solvent ratio. Resins or binders are polymers that form the paint film together with the pigments after the solvent has evaporated. During the synthesis of resins on bench scale, the progress of polymerisation is monitored via the determination of the volatile content.

Polymerisation control with HB43 Halogen Moisture Analyzer
In alkyl resins, Asian Paints’ major business segment, the volatile content is in the range of 20–40% and is determined by drying in an oven at 120°C for 1 hour. These same results can be obtained much faster with the HB43 halogen moisture analyzer from METTLER TOLEDO. After 1 g of sample has been spread on a glass fibre pad, the heating cycle starts immediately. At a temperature of 140°C, the volatile compounds evaporate and the volatile content is determined within 6 minutes. Senior scientist Syed Haseebudin is more than satisfied with how the HB43 facilitates development work: “The results are available quickly and are well reproducible – we conduct our experiments more efficiently with the HB43.” Fast and reliable – this is how METTLER TOLEDO brings Asian Paints closer to discovering new paint formulations.

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