

Low VOC Coatings and Paints

There is a perception that low VOC paints and coatings emit fewer VOCs than traditional latex-based and oil-based paints used in the past. This isn't necessarily the case. What has changed is the type of VOCs emitted from low VOC paints and the volatility of these solvents.

The EPA definition of a VOC is "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions." (<http://www.epa.gov/ttn/emc/facts.html>). VOCs are present in paints and coatings to serve as a solvent that will readily evaporate leaving behind a thin film substrate that contains the pigment. Paints and coatings manufacturers have adjusted their formulations to eliminate or reduce VOCs that appear on the EPA VOC list of compounds (<http://www.epa.gov/ttn/atw/188polls.html>). By using this definition of VOCs, manufacturers can replace compounds from this list with other volatile compounds not on the list and call the new formulation a "low" VOC paint or coating. This doesn't necessarily mean the newer paint formulation has lower VOCs, it means the formulation has fewer VOCs that are on the EPA list of compounds. Even with low VOC paints, we still see paint VOCs in a large portion of the air samples we analyze.

About Prism Analytical Technologies, Inc.

Prism Analytical Technologies, Inc. is a leading consultative air testing laboratory in the United States that is devoted to the chemical identification and analysis of contaminants in the air. We are a recognized leader in the development and deployment of ambient air testing methodologies for Fortune 100 and 500 companies, industrial hygienists, and environmental consultants. Prism's science-based technologies and wide range of air testing support help clients solve indoor air quality, process control, industrial, and environmental challenges.