

Clancy's Commercial

HIGH PERFORMANCE COATINGS

THE SOLVENT GUIDE

Solvent quality and suitability are very important to the performance of a coating. Film integrity, appearance and application are affected by the nature of the solvent(s). Solvents play a very important role in film formation and durability, even though they are not permanent components.

Two basic properties must be considered when choosing the proper solvent to use, i.e. solvency and evaporation rate. Solvency refers to the ability to dissolve something. In coatings, the solvent must dissolve the resin and reduce its viscosity so it can be applied. Evaporation is necessary as part of the drying process as well as to control the coating viscosity at different stages of drying. A solvent must evaporate relatively quickly during initial drying to prevent runs or sags in the film, but it also must evaporate slowly enough to give good flow, leveling and adhesion.

The most common coating solvents are aliphatic and aromatic hydrocarbons manufactured from petroleum. Differences in solubility of coating resins may dictate the use of more expensive, specific chemical type solvents. In choosing a solvent, the coatings formulator must also consider such factors as odour, toxicity, air pollution restrictions and flammability