



## Cleaning of Acrylic Painted Surfaces

July 12 – 15, 2016

The John and Mable Ringling Museum of Art  
Sarasota, Florida

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**SESSION TITLE:** Gelling/Emulsifying non-polar systems

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**Lecture 6 & Practical Session 6:** Silicone Emulsion Systems: Theory and Practice

**INSTRUCTOR:** Chris Stavroudis

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### ABSTRACT

The use of silicone-based polymeric emulsion stabilizers will be presented. These systems offer water in oil (w/o) emulsions in non-polar silicone solvents without the need for surfactants. Velvexil Plus and KSG 210 and 240 are commercial products that can be used to create stable emulsions in a silicone solvent continuous phase. KSG 350-Z can make similar emulsion systems in mineral spirits as well as silicone solvents. These systems are stable to large amounts of ionic material in the aqueous phase. The emulsion systems are conventional emulsions so they are white and opaque. As these emulsions are built without the use of surfactants so there is no issue with potential surfactant residue. As the polymeric emulsion stabilizers are macromolecules they are less able to penetrate into a surface and are therefore easily and thoroughly rinsed with non-polar solvents. The practical use of these materials will be discussed in terms of actual treatments.

### OBJECTIVES

Participants will become familiar with formulating, mixing and using non-polar polymer stabilized emulsion systems

### CONTENT OUTLINE

#### Lecture 6 (Thursday morning after break)

- Introduction to Velvexil Plus and Shin-Etsu KSG materials
- Preparation of low polarity polymeric stabilized emulsions
- Using Velvexil Plus to emulsify polar solvents
- Presentation of case studies

#### Practical Session 6 (Thursday afternoon)

- Preparation of silicone based polymeric stabilized emulsions from MCP solutions or pH adjusted water.
- Test these systems on sample acrylic paint surfaces.

### METHODOLOGY

PowerPoint lecture, discussion, and hands-on mixing and testing.



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