

POSS® Dispersants: Frequently Asked Questions

- 1) What is the best method to use POSS® dispersants?**
 - a. POSS® dispersants are best used by adding them to the matrix resin prior to adding fillers and pigments. Simply add POSS® dispersant to the matrix material and mix until POSS® is dissolved or evenly dispersed.

- 2) What types of resins are compatible with POSS® dispersants?**
 - a. POSS® dispersants are compatible with a wide range of resins including acrylics, epoxies, phenolics, and carbonates. Even if your resin system is not listed here, we still encourage you to try them.

- 3) Does POSS® need to dissolve in the resin to be an effective dispersant?**
 - a. Not necessarily. We have observed cases where the POSS® dispersant being used was only marginally soluble in the carrier resin. However, upon addition of filler, the dissolved POSS® 'finds' the fillers surface and binds to it, allowing more POSS® to be brought into solution and treat more filler. This process continues until the filler is completely treated.

- 4) How much POSS® dispersant should be used?**
 - a. This is dependent on the filler concentration, its surface area, and the amount of bondable sites on the filler. For example, a 300 nm TiO₂ pigment takes about 0.7 wt-% of SO1455 POSS® dispersant before it is fully covered. Carbon black with a particle size of 15 nm requires about 15 wt-% for full coverage. As a general rule, we recommend starting at a concentration of 3 wt-% POSS® dispersant, relative to the amount of filler, and then decrease the concentration as necessary.

- 5) What is the physical form of POSS® dispersants?**
 - a. POSS® dispersants vary in chemical structure and range from a white powder to a medium viscosity oil.

- 6) Will POSS® dispersants work on fillers that are already surface treated?**
 - a. Because there are so many varieties of fillers and treatments on the market, it is impossible to give a definite answer. We have seen cases where POSS® dispersants will enhance the dispersion of treated fillers, and other cases where they do not. We encourage you to test it for yourself on your specific filler.

- 7) Will POSS® dispersants work with other types of dispersants?**
 - a. In a lot of cases POSS® dispersants act as synergists when used with other types of commercial dispersants.

- 8) Can I get technical assistance?**
 - a. We are more than happy to offer technical assistance for POSS® dispersant application questions. Please contact us at 601-544-3466.