



DATA SHEET

Formulating tips for Pureact TR-L90

Preparing Clear Solutions of Pureact TR-L90 in water

Preparation of clear solutions of Pureact TR-L90 in water is a two-step process that starts with a high concentration of the surfactant.

- First prepare a solution of Pureact TR-L90 in water at a solids level of at least 25%. Anything below this prescribed amount of solids will not become clear upon heating. This solution is prepared by adding the flakes to water with overhead stirring at a low speed and heating to 70 - 80°C. Once the flakes have dissolved into the water, the solution will appear clear. (Be cautious because the Pureact TR-L90 Flakes have a tendency to clump together and adhere to the mixing blade.)
- Once clear, the solution can be further diluted to lower concentrations as desired by the addition of room temperature water. This needs to be done immediately after the Pureact TR-L90 flakes have been completely dissolved because the material will begin to precipitate out of solution and solidify as it cools. In comparison to the higher concentration, a lower concentration will remain clear over a longer time period.
- If a solution of TR-L90 (>25% solids) has precipitated out and is cloudy, it can be reheated to 70°-80°C and slowly mixed to return to clarity.

Preparing Clear Aqueous Solutions of Pureact TR-L90 with other surfactants

Pureact TR-L90 can be blended with other surfactants in formulations to prepare clear formulations. In fact, we have found that it is attainable by blending Pureact TR-L90 at lower concentrations with some surfactants. Our work has shown that blends of 10% active Pureact TR-L90 can be mixed with 10% active co-surfactants such as Empigen® BS/FA, Empigen® BS/O, Nansa® LSS 38/AX and Empicol® SDD/O to create clear systems at room temperature.

Viscosity Modifications with Pureact TR-L90



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Pureact TR-L90 contains no sodium chloride. As a result, it requires additional amounts of sodium chloride to reach an acceptable viscosity. The use of additional co-surfactants is recommended to assist in building viscosity.

- Empigen® S18 and Empilan® CIS resulted in acceptable viscosity profiles.
- PEG-150 Distearate and Carbopol® Silk have also worked well to stabilize and increase viscosity.

