Micron sized polymeric colloids are gathering increased attention due to their tactile effects when applied as coating. Next to the different feels, there is a strong positive effect on aesthetics for matted surfaces, especially when black and vivid colors are used. This paper will focus on particle formation of these micron sized dispersions, investigating the relevance of self-emulsification versus shear induced particle formation as well as several other factors which influence particle size and shape.

Surface topography and tribological properties of micron sized polyurethane dispersions will be used to show the effect of surface mechanics as well as size on haptic perception. The coefficient of friction and adhesion are measured for a series with increasing modulus, ranging from 40 to 100 MPa and similar particle sizes, using AFM imaging and AFM based force measurements and friction force microscopy. This creates the option to independently investigate the effect of different surface mechanical properties at similar particle sizes and surface roughness and how this relates to differences in haptic perception.