Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Yield stress of stearically stabilized colloids SURESH AHUJA, Xerox Corporation, TERRY BLUHM — The bulk property, yield stress has been modeled by Larson in the past for spherical colloidal particles with dependence on volume fraction of solids particle diameter and interaction potential (sum of van der Waals potential and electrostatic potential. In our organic pigment dispersions polymer stabilized followed Herschel-Bulkley equation with yield stress which was non-linearly dependent on pigment surface area measured by BET. Stability of dispersions changed with time in terms of particle size and yield stress as well as on the type of deformation, shear applied to the dispersion. The results of yield stress are compared with models in terms of interaction potential, particle size and zeta potential..

Suresh Ahuja
Xerox Corporation

Date submitted: 22 Nov 2006 Electronic form version 1.4