

MORPHOLOGICAL CHARACTERIZATION OF BLOCK COPOLYMERS BY TRANSMISSION ELECTRON MICROSCOPY (TEM)

María J. Yáñez¹, Mario D. Ninago², Leopoldo R. Gómez², Andrés E. Ciolino², Enrique M. Vallés², Daniel A. Vega³, Marcelo A. Villar²

¹Centro Científico Tecnológico Bahía Blanca (CCT-BB)

Camino “La Carrindanga” Km 7, (8000) Bahía Blanca, Argentina

²Planta Piloto de Ingeniería Química, PLAPIQUI (UNS-CONICET)

Camino “La Carrindanga” Km 7, (8000) Bahía Blanca, Argentina

³Departamento de Física, Universidad Nacional del Sur

Av. Alem 1253, (8000) Bahía Blanca, Argentina

Block copolymers are macromolecules composed of at least two blocks of different monomers. Block copolymers often exhibit unique and useful properties in solution and in the solid state as a consequence of a microphase separation produced by thermodynamic incompatibility of the blocks. Domains obtained show different morphology (spheric, cylindric or lamellar, among others) as a function of the volume fraction and the relative length of each block as well as the nature of the blocks involved. On the other hand, defects associated to some morphologies can be modified by thermal treatments.

In this work we present the morphological characterization of di- and triblock copolymers based on siloxane by using Transmission Electron Microscopy (TEM).