Testing temperature on interfacial shear strength measurements of epoxy resins at different mixing ratios - DTU Orbit (29/03/2019)

The interfacial properties as Interfacial Shear Stress (IFSS) in fibre reinforced polymers are essential for further understanding of the mechanical properties of the composite. In this work a single fibre testing method is used in combination with an epoxy matrix made from Araldite 506 epoxy resin and triethylenetetramine (TETA) hardener. The IFSS was measured by a microbond test developed for a Thermal Mechanical Analyzer. The preliminary results indicate that IFSS has an inverse dependency of both testing temperature and the mixing ratio of hardener and epoxy resin. Especially interesting was the decreasing dependency of mixing ratio at higher temperature.