

APPLICATION SHEET

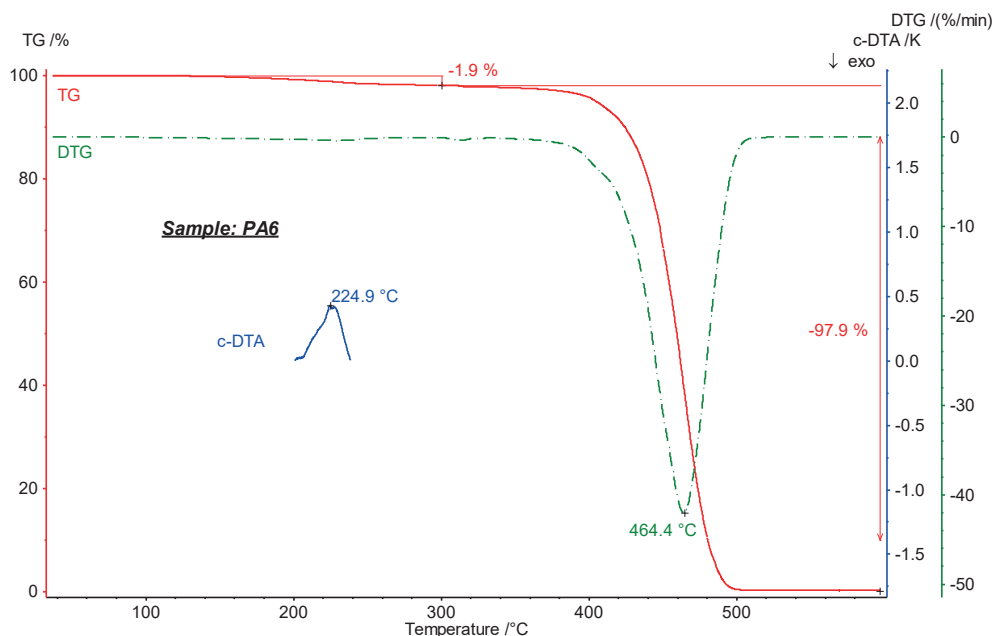
Polymers · Textiles
TG 209 **F3 Tarsus**

Polyamide 6

Introduction

Polyamide is a polymer containing the amid group (–NHCO–) in the repeat unit. Polyamide 6 is one of the

most important nylons, commercially being a major fiber forming polymer as well as a useful engineering plastic. Polyamides can absorb the atmospheric moisture affecting their mechanical properties.



Test Conditions

Temperature range: 35°C ... 600°C
Heating/cooling rates: 20 K/min
Atmosphere to 550°C: Nitrogen at 20 ml/min
Sample mass: 9.94 mg
Crucible: Al₂O₃

Test Results

The first mass loss of 1.9% is most probably due to the evaporation of water. The calculated DTA signal shows an endothermic effect at 224.9°C (peak temperature). It is due to melting of the sample. As a comparison, a DSC measurement was carried out on the same sample (see application sheet polyamide 6, DSC 200 **F3 Maia**®). The peak temperature of melting was detected at 224.5°C. The second mass-loss step of 97.9% is due to degradation of the polymer.