Polyoxymethylene (POM)

Introduction

Polyoxymethylene (POM) is commonly used as a direct replacement for metals due to its stiffness, dimensional stability and corrosion resistance. Polyoxymethylene is an engineering plastic used to make gears, bushings and other mechanical parts. As the most important polyacetal resin, it is a thermoplastic with good physical and processing properties.

![Graph showing TG and ion current against temperature for POM](image)

**Test Conditions**

- Temperature range: RT ... 700°C
- Heating rate: 20 K/min
- Atmosphere: Nitrogen at 40 ml/min
- Sample mass: 12 mg
- Crucible: Alumina
- Sensor: Platinel

**Test Results**

During the pyrolysis of POM, the monomer (30 amu) occurs in great amounts (not shown in this figure), but also the dimer, [-CH2O-]2 (60 amu) and higher mass numbers (i.e., 73, 75 amu) can clearly be seen. An almost completed decomposition was measured up to 500°C.