

APPLICATION SHEET

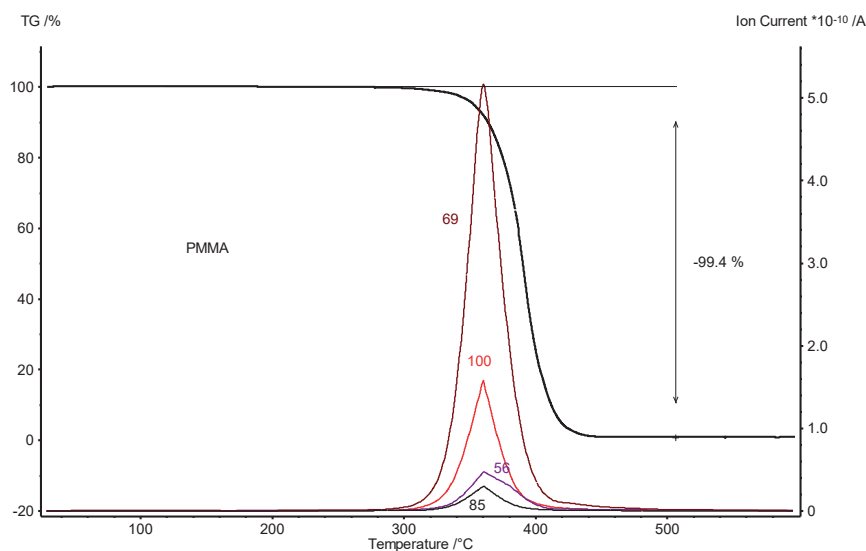
Polymers · Polymer Manufacturing
TG 209 **F1 Libra**® - QMS 403 **Aëlos**

PMMA (Polymethylmethacrylate)

Introduction

Polymethyl methacrylate (PMMA) or poly(methyl 2-methylpropenoate) is the polymer of methyl methacrylate. This thermoplastic is transparent and is sold under the trade

names Plexiglas, Perspex, Acrylite, Acrylplast, and Lucite; it is commonly called acrylic glass or simply acrylic. The material is often used as an alternative to glass. PMMA is lighter than glass, does not shatter and can easily be formed by heating to 100°C.



Test Conditions

Temperature range: RT ... 600°C
Heating rate: 20 K/min
Atmosphere: Nitrogen at 40 ml/min
Sample mass: 7.1 mg
Crucible: Alumina
Sensor: Platinel

Test Results

PMMA totally reacts to CO₂ and H₂O when heated in an air atmosphere. During the pyrolysis (heating inert gas atmosphere), the monomer (100 amu) and its fragments can be detected. This can easily be seen in the figure above.