

# APPLICATION SHEET

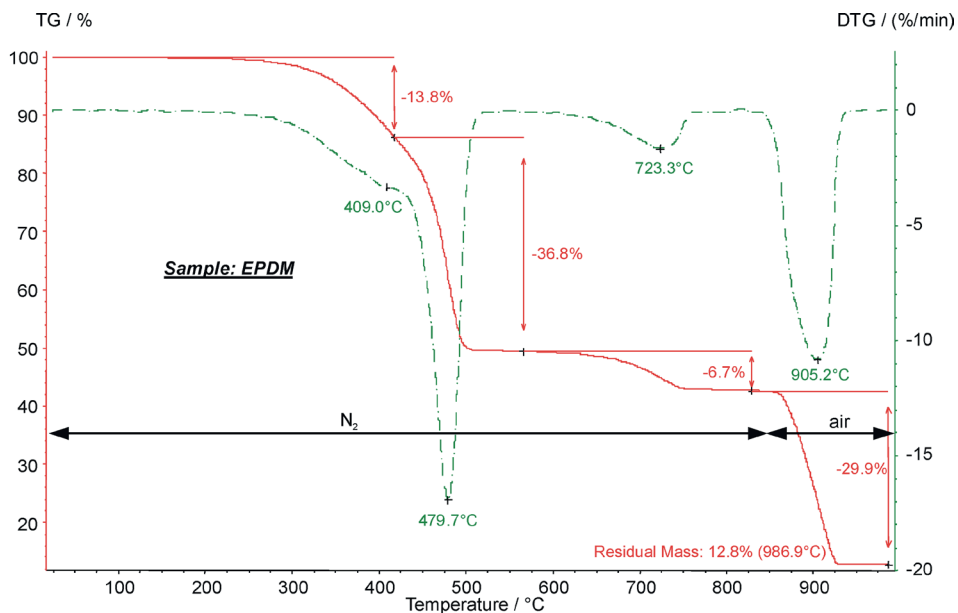
Polymers · Automotive  
TG 209 F1 Libra®

## Ethylene Propylene Diene Rubber (EPDM)

### Introduction

EPDM is a copolymer of ethylene, propylene and diene units. It is characterized by a wide range of applications. EPDM rubber is used in automotive weather-stripping and

seals, glass-run channel, radiator, garden and appliances hose, tubing, belts, electrical insulation, rubber mechanical goods, plastic impact modification, thermoplastic vulcanizates, motor oil additive applications, etc.



### Test Conditions

Temperature range: -25 ... 850°C in nitrogen  
850 ... 1000°C in air  
Heating rate: 20 K/min  
Atmosphere: Nitrogen / air at 20 ml/min  
Sample mass: 4.79 mg  
Crucible: Al<sub>2</sub>O<sub>3</sub>

### Test Results

Four steps were detected in the mass-loss curve between room temperature and 1000°C. The first one at 409°C (peak temperature of the DTG curve) is most probably due to plasticizers. The second step (peak temperature of the DTG curve at 479.7°C) with a mass loss of 36.8% is typical for the degradation of EPDM. At 723.3°C, calcium carbonate decomposes into CO<sub>2</sub> and CaO. After switching to air, the mass loss of 29.9% is related to the combustion of carbon black.