

APPLICATION SHEET

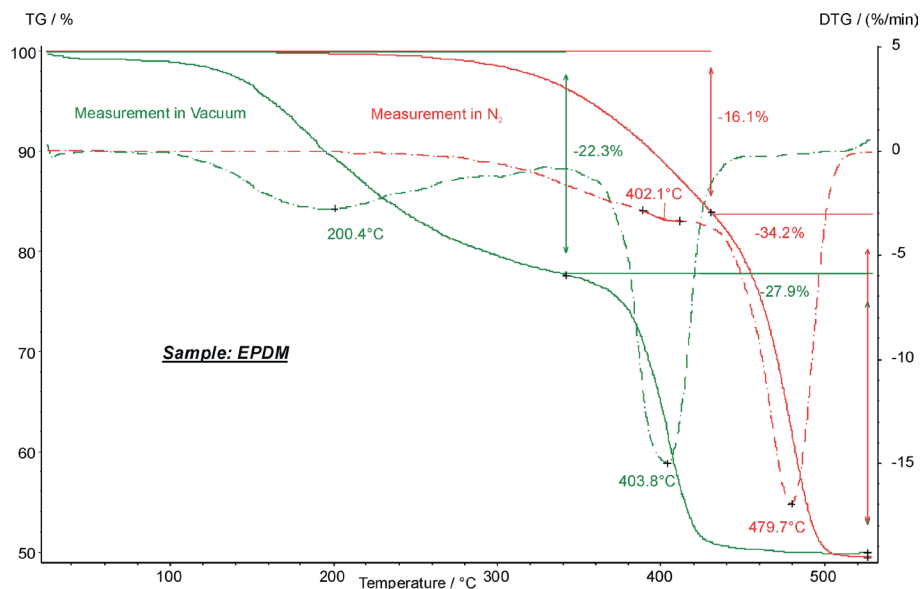
Polymers · Automotive
TG 209 F1 Libra®

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 appliance hose, tubing, belts, electrical insulation, rubber mechanical goods, plastic impact modification, thermoplastic vulcanizates, motor oil additive applications., etc.



Test Conditions

Temperature range: RT ... 670°C
Heating/cooling rates: 20 K/min
Atmosphere: Nitrogen or vacuum
Sample mass: 4.76 mg (meas. in vacuum)
4.79 mg (meas. in nitrogen)
Crucible: Al₂O₃

Test Results

Thermogravimetric tests under vacuum can help quantify the content of volatiles. Two steps were detected in the mass-loss curve between room temperature and 670°C in the tests under vacuum and nitrogen. The first one is due to volatiles, the second step is typical for the degradation of EPDM. The measurement under vacuum allows for better separation of both steps. Due to the reduced pressure, the evaporation of volatiles is shifted to lower temperatures. This allows for better evaluation of both mass-loss steps.