

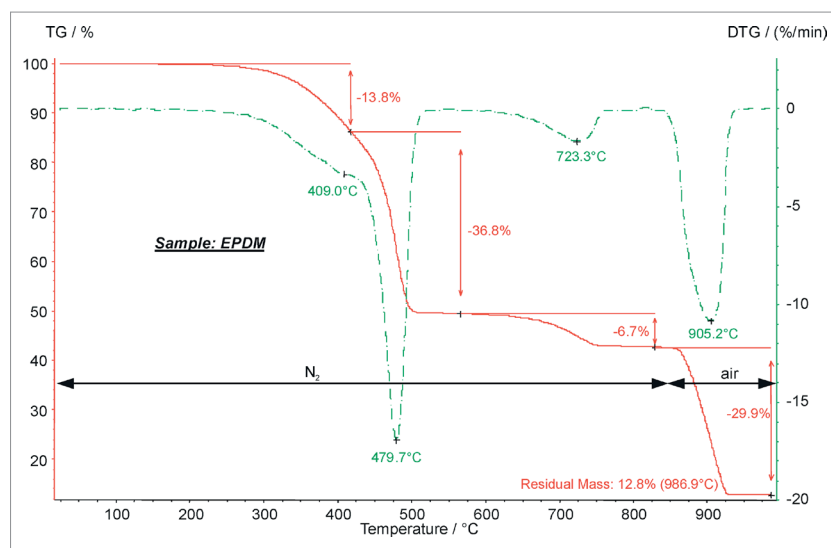
APPLICATION SHEET

POLYMERS – AUTOMOTIVE

ETHYLENE PROPYLENE DIENE RUBBER (EPDM)

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.



Instrument

TG 209 **F1 Iris**®

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 ₂ O ₃

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 DTG curve) is most probably due to plasticizers. The second step (peak temperature of 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 CO₂ and CaO. The mass loss of 29.9% after switching to air is related to the combustion of carbon black.