

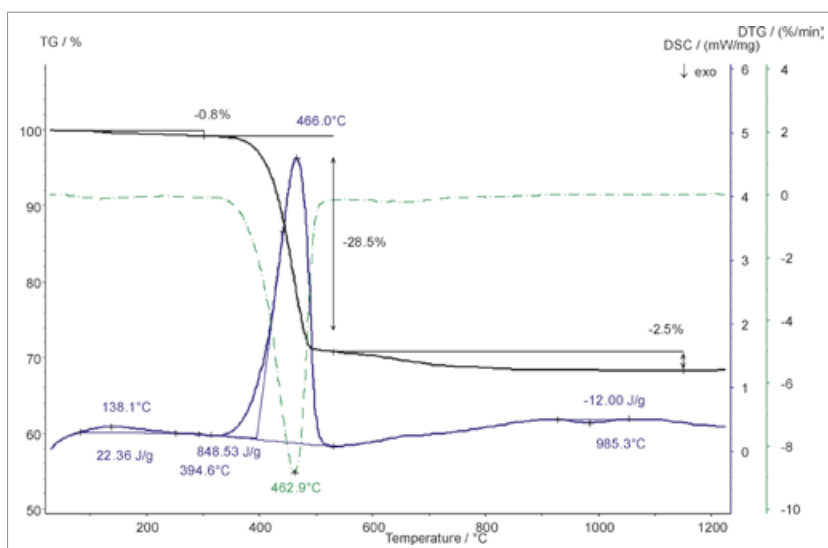
APPLICATION SHEET

INORGANICS – CHEMICAL INDUSTRY

Mg(OH)₂

Magnesium hydroxide is used as a flame retardant material in thermoplastics, PVC and rubbers. It is also employed as an absorbent for SO₂ in fuel oils, flocculants for waste

water or cleansing agents. By firing Mg(OH)₂, water is evolved and MgO remains which is a high-temperature refractory material.



Instrument

STA 449 C Jupiter®

Test Conditions

Temperature range	RT ... 1250°C
Heating/cooling rates	10 K/min
Atmosphere	Air at 60 ml/min
Sample mass	44.5 mg
Crucible	Pt-Rh
Sensor	TG-DSC type S

Results

The measured sample is not pure Mg(OH)₂ which is indicated by the small TG step of 0.8% before the main mass loss of 28.5% and the mass loss step of 2.5% at about 550°C. The 1st TG step is most probably due to surface water. The 2nd TG step is effected by the dehydration of the magnesium hydroxide. The 3rd TG step is most probably due to the decomposition of some MgCO₃ content.