

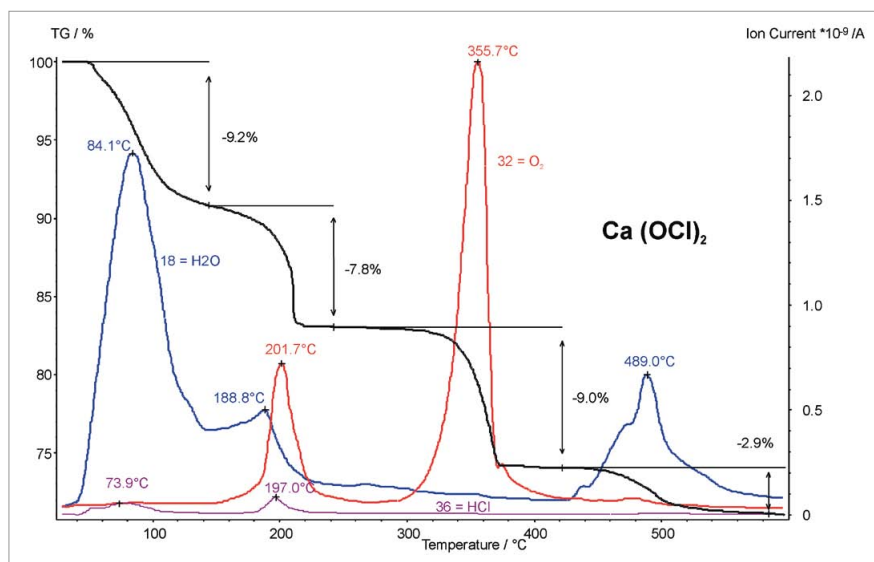
APPLICATION SHEET

INORGANICS – CHEMICAL INDUSTRY

CALCIUM HYPOCHLORITE

Calcium hypochlorite $\text{Ca}(\text{OCl})_2$ is an oxidizing substance and is used i.e. in detergents as bleach. It is also used as disinfection material of drinking water containers and

swimming pools. As calcium hypochlorite is an oxidizer it likes to react with organic materials when in direct contact and heated.



Instrument

TG 209 **F1** – QMS Aëolos®

Test Conditions

Temperature range	RT ... 600°C
Heating rate	10 K/min
Atmosphere	Nitrogen at 40 ml/min
Sample mass	18.9 mg
Crucible	Alumina
Sensor	TG type Platinel

Results

Calcium hypochlorite was measured with a TG with QMS system connected to the gas outlet. The original “water-free” calcium hypochlorite had hydrolysed during storage. This can clearly be seen from the TG and mass spectrometer results during the 1st, 2nd and 4th TG mass losses where water is detected (84°C, 189°C and 489°C). Pure “water-free” calcium hypochlorite shows only two TG steps where oxygen is released (2nd and 3rd TG steps). The remaining product would be CaCl_2 at 400°C. Because of the water content, also small amounts of HCl were found (74°C and 197°C, peak temperatures).