

APPLICATION SHEET

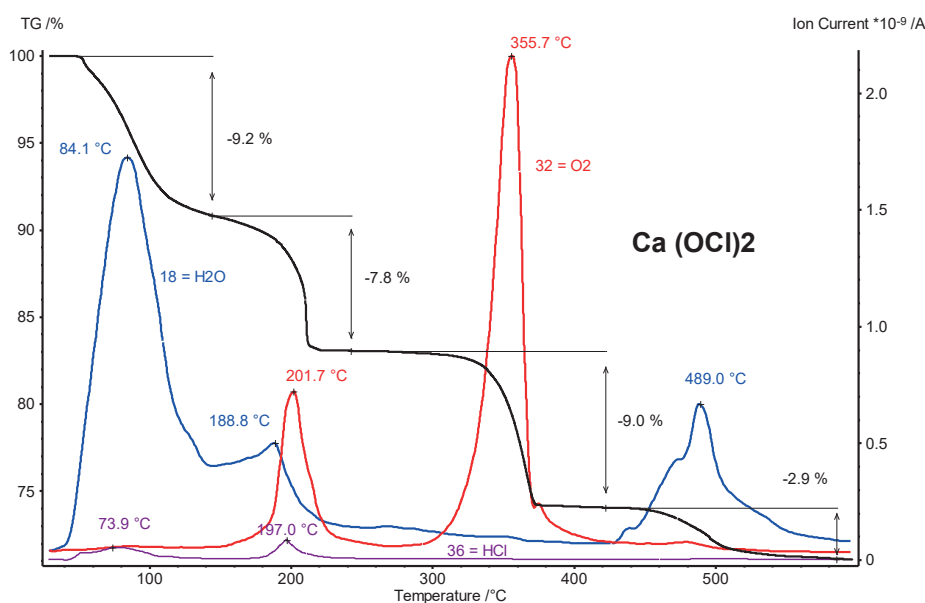
Inorganics · Chemical Industry
TG 209 **F1** Libra® – QMS Aëolos

Calcium Hypochlorite

Introduction

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.



Test Conditions

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

Test Results

Calcium hypochlorite was measured with a TGA 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 TGA and mass spectrometer results during the 1st, 2nd and 4th TGA mass losses where water is detected (84°C, 189°C and 489°C). Pure "water-free" calcium hypochlorite shows only two TGA steps where oxygen is released (2nd and 3rd TGA 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).