



# Gore™ Filtration Products

Chemicals Industry

## Case history 14

# Titanium Dioxide

### OPTIMIZATION POTENTIAL

Existing Acrylic filters used in spray dryer were experienced short life times of only 6–12 months and high pressure drops. Failures were producing high emissions and required unscheduled system downtime, inspection, and change outs. High pressure drop led to deration of system and lower productivity.

### SOLUTION

Acrylic filters were replaced with GORE™ Acid-Resistant Aramid Felt membrane filters. System was optimized to prevent temperature excursions and a new blower was installed. Cleaning frequency was increased to maintain dP.



### RESULT

Bag life was increase to 3,5 years and pressure drop was stabilized at 1.000 Pa throughout life of filters. Emissions and deration problem were eliminated and new bags and blower allowed increased production.



Photo: Royal Society of Chemistry

<b>Application:</b>	TiO <sub>2</sub>
<b>Process:</b>	Spray Dryer
<b>Plant capacity/production rate:</b>	n/a
<b>Gas flow rate:</b>	70.000 m <sup>3</sup> /h
<b>Operating temperature:</b>	125°C
<b>Total filter area:</b>	1.350 m <sup>2</sup>
<b>Emissions rate:</b>	< 5 mg/m <sup>3</sup>
<b>Differential pressure:</b>	1.000 Pa
<b>Bag life:</b>	3,5 years
<b>Filter material:</b>	GORE™ Acid resistant Aramid Felt

