

## Phosphoric Acid Production

Chemical production, Benelux

<b>Customer:</b>	World leader in phosphate chemistry
<b>Application:</b>	Sterile air venting
<b>Products:</b>	Polyfil™ WF
<b>Primary Motive:</b>	Clarification issues in food production
<b>Location:</b>	Benelux
<b>Project Date:</b>	2019
<b>Division:</b>	New Milton



### Customer Overview:

Benelux manufacturer of an extensive range of phosphate and fluorine products, which are used in food, industrial and pharmaceutical applications as well as in fertilisers.

### Customer's Problem:

The customer made contact with Porvair in order to resolve an issue with the clarity of their final product, contamination was occurring at the plant, during truck loading. The final product is required to be clear, however, black particles were noticed in the compound, presenting a serious problem to the food-grade product. The customer also suggested a full review on their filtration components in order to analyse efficiency, spend and cost saving.

### Porvair Solution:

We manufacture a range of solutions for the production of nitric acid, maleic anhydride, sulphuric acid, phosphoric acid, polyols, magnesium nitrate as well as HDPE and LLDPE. Through the use and development of various filter media, we have enabled longer campaigns to be obtained and greater material recovery to be achieved.

### Project Overview:

We delivered test samples with their validation guides and the product was tested in full production at the plant. The samples were then returned to Porvair's laboratory where it was identified that the bag filter at the front of the production line was capturing a large amount of contamination.

Therefore, given the scale of the plant, it was identified that a safety filter was required to capture the extra particles. It was calculated that a 15x30" filter housing, for each of the four loading stations, would be required, therefore a high flow option was recommended to reduce in footprint.

Moreover, analysis indicated that significant quantities of iron, barium and chromium were present, potentially causing corrosion within the system, from ancillary equipment to piping. Therefore, it was recommended that filtration at 10-20µm with an absolute filter would remove these contaminants.

The customer was delighted with Porvair's full service, from system analysis, laboratory testing to filter supply, and will therefore retain Porvair as a key supplier.

### Product and system information:

We replaced their existing range of products with the following:

- Bag filter
- 4 new single round, high-flow filter housings, each with a 40" Polyfil™ WF 10µm placed at the end of the production line, prior to filling the road tankers.

### Other Opportunities:

- Chemical processing
- Fine chemicals
- Catalyst recovery
- General industrial

