

CASE STUDY



CORZAN CPVC TECHNICAL INTEGRITY MAKES IT THE IDEAL SOLUTION FOR PROFILCO SUPPORTING THE CHLOR ALKALI INDUSTRY.

PROVIDER:

ProFilco, NL

INDUSTRY:

Chlor Alkali

APPLICATION:

Membrane filter heads

Profilco B.V., specialists in filtration and separation technology, have chosen to specify Corzan CPVC for specialist solutions required to support the Chlor Alkali industry. Innovators in their field, ProFilco B.V. specialize in systems for the economical sub-micron filtration and separation of suspended solids from large liquid streams, with the purpose to improve performance, quality, capacity and reduce overall operational costs.

Chlor Alkali plants create an incredibly corrosive environment, involving the transport of harsh chemicals at extreme temperatures in combination with high energy electrolysis processes. The integrity of most piping systems can quickly be compromised, with many facilities deciding between investing in expensive, exotic alloys or facing on-going maintenance challenges and potentially costly, premature failures.

Corzan CPVC stands up to the rigorous and unique challenges of this industry by providing customers a reliable and affordable solution. Superior chemical resistance across a broad spectrum of substances and low calcium and magnesium content for high purity brine, ensure Corzan CPVC can deliver to the high standards required. The compound also offers low thermal conductivity compared to metallic materials for improved safety and has been pressure rated for continuous use at temperatures up to 95°C (if the medium is water) with the ability to be used at higher temperatures in non-pressure systems.

ProFilco started working with Corzan around 5 years ago following customer recommendations within the industry and in that time Corzan has grown its existing customer base with both repeat and new business and in fact has become the industry standard.



They use membranes manufactured from pPTFE (porous PTFE), tubes for the cartridge made from HDPE and the heads that hold everything together from Corzan CPVC. ProFilco chose Corzan not only because of the chemical and temperature resistance of CPVC, but also due to the mechanical properties which allow the material to cope with the mechanical stresses the product is exposed to during processing.

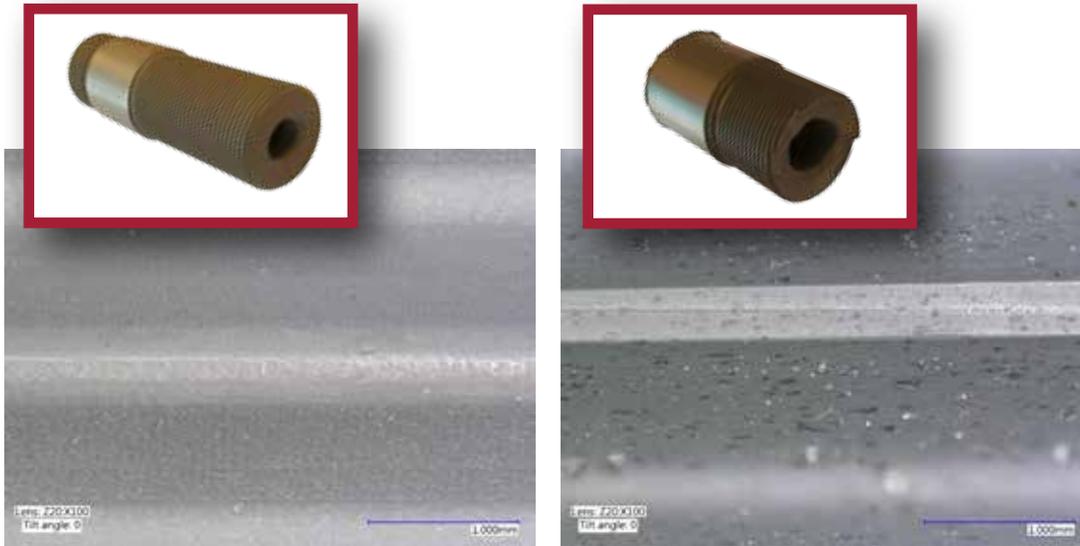
A further determining factor for Corzan specification is its range of chemical resistance and ability to resist temperatures up to 95°C. The liquid that is being filtered in the Chlor Alkali industry is so highly corrosive that exotic and rare metals would normally be specified for this application. However, due to its properties, Corzan CPVC represents the perfect alternative and ensures a complete metal free solution, allowing for a long-lasting corrosion-free and cost-efficient construction.

They undertook their own tests on other CPVC brands to determine that Corzan CPVC offered the best technical solution. Other products were found to have a very porous structure, whereas the Corzan product is very compact. It was vital that the chosen CPVC material would maintain its integrity and torque under the applied stress when threading the screw into the membrane holder. Corzan CPVC ensures this level of technical ability and integrity.

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Corzan
Homogenous structure, allowing for torque resistance

Competitor
Porous structure caused by voids, premature failures from torque

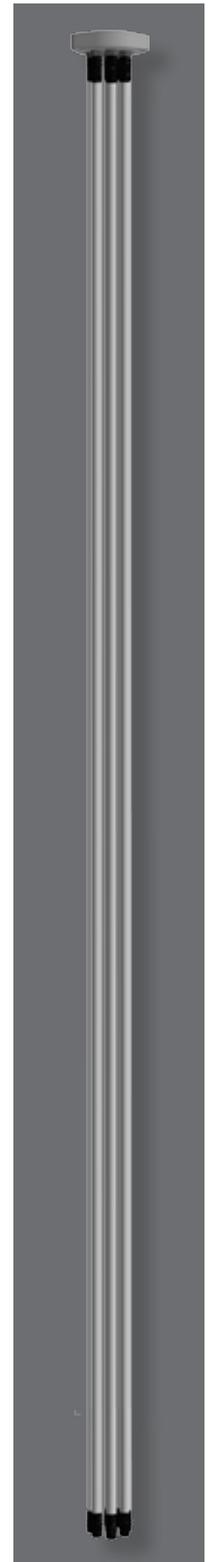
Gerard J. Markhorst, the General Manager of ProFilco, recognizes that Corzan provides the security of a high-quality compound through increased mechanical strength. This mechanical strength is important not only during preparation of the individual products but when providing enough torque for threading and cementing, contributing to the longevity of the product for the end-user.

When comparing different CPVC products, the superior quality of Corzan CPVC was soon noticed. Not all CPVCs are the same, hence it is important to be assured of the reliability and quality control of the material compound as this directly impacts the longevity of the product in use.

With more than 50 years of field performance, Corzan CPVC has proven to outperform alternative piping materials, including carbon steel, stainless steel, glass-lined and PTFE-lined piping, and a variety of expensive exotic alloys in chlor alkali applications. In addition, Corzan Industrial Systems ensure the purity and concentration of the various compounds required in an electrolysis chamber.

Available in a large array of sizes and dimensions, Corzan solutions can easily be adapted for use with pipes, tanks, headers, manifolds and storage towers as well as custom manufactured into sheet and rods to meet specific plant requirements.

Corzan Industrial Systems provide an exceptional balance of properties to the Chlor Alkali industry to improve reliability and user confidence, whilst reducing capital and life-cycle costs and avoiding costly downtime.



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