

A VisClear ROAD AHEAD FILTERING HIGH VISCOSITY RESINS



“

FIRST CLASS SERVICE
WORLD CLASS FILTERS

”

Elastomers for windscreen wipers...

just one of the successful applications for **VisClear II**

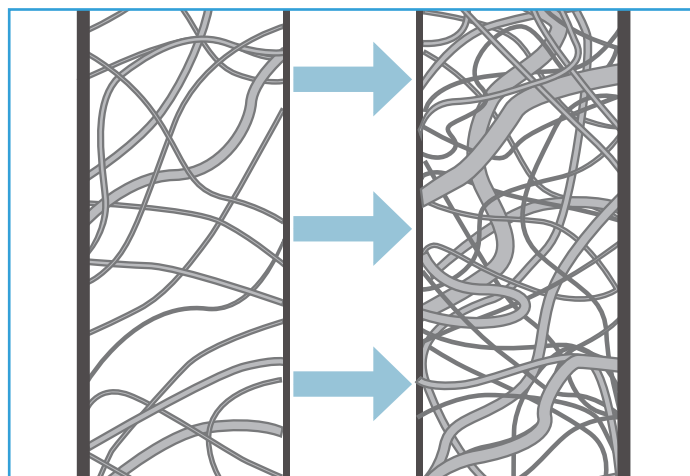
TIME FOR A CHANGE

With the withdrawal from the market of Resin Bonded Cartridges (RBC) such as Micro-Klean RB^{TM(1)} and the questionable performance of some existing RBC, manufacturers have been struggling to find an adequate filtration solution for their high viscosity formulations. Until now.

The combination of high viscosity, temperature and chemical compatibility provides a challenging environment for any filter. To combat the high differential pressures usually encountered in these applications the traditional approach was to use RBC products, primarily due to their rigidity.



RIGIDITY: THE KEY TO CONSISTENT FILTRATION



If a filter matrix is allowed to collapse due to either differential pressure, weakening due to temperature or chemical compatibility or a combination of all three, the consequences are many and irreversible:

1. Porosity reduces
2. Flowrate is reduced
3. Time to blockage is severely reduced
4. Captured contaminants can off load into the filtrate compromising product quality

Consequence - Lost revenue due to;

1. Mid batch change outs: costs money in time / resource (filter changeouts) / additional consumable / filtration costs
2. Variable quality filtrate: costs associated with rework / customer returns

THE TROUBLE WITH RBC

Resin bonded cartridges do provide the rigidity required for the application, but they have many drawbacks.

Performance

- (+ve) Rigid construction
= retained efficiency under high viscosity and high temperature applications
- (-ve) Particle shedding
= contamination of filtrate
- (-ve) Variable efficiency from filter to filter (up to 35%)
= inconsistent performance batch to batch

Health and Safety

- (-ve) The production of RBC uses phenolic resins



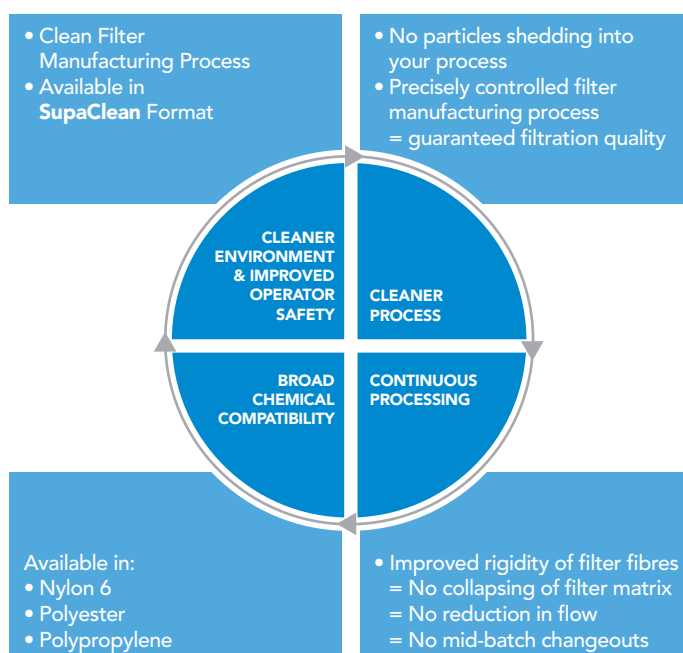
Typical fibre shedding from RBC

THE SOLUTION

VisClear II: Clean Product / Clean Process / Clean Environment:

Amazon Filters Ltd have spent the last 2 years working on the development of a rigid structure based on meltblown technology. Through many iterations and customer trials the **VisClear II** has evolved into an enhanced replacement for all applications using old technology RBC filters.

The development of a bespoke die configuration and melt-blowing process has resulted in a product with more than double the rigidity of the original **VisClear** coupled with repeatable performance. A choice of 3 polymer variants also extends the chemical compatibility of the **VisClear II**.



VisClear II: In Practice

Extensive product development and testing with multiple manufacturers over the past year has resulted in the successful replacement of resin bonded cartridges on a wide range of coatings and resins.

High performance EPDM elastomer for the automotive industry (Netherlands)

- Customer changed from 150 micron, 3M Micro-Klean™ to **VisClear II** 08E
- Filtration at 90°C and viscosities ranging from 100 to 1500cP on a rubber solution dissolved in a solvent based on hexane
- Large batches running through 300 x 30" filters at approximately 30kg/hr/10" filter
- **Result** - Consistent filtrate quality and flow rate over multiple batches with no observed deformation of the filtration media

Alkyd Resins: water-dilutable coatings for paper (Germany)

- Customer changed from 75 micron Parker Probond™⁽²⁾ to **VisClear II 08E**
- Filtration at 90°C, viscosity 25000mPa.s. Resin based on triglycerides and isophthalic acid
- Batch size 13300 litres
- **Result** - Consistency in performance batch to batch with no deformation of the cartridge filter media structure

Special Coatings on Polyester film used in printing (France)

- Customer changed from 100 micron Micro-Klean™ to **VisClear II 08R**
- **Result** - Equivalent performance along with process improvements afforded by the **SupaClean** system that reduces operator exposure to the resins and improves economics

Fuel Lubricant additives (France)

- Customer changed from 50 micron Micro-Klean™ to **VisClear II 08R** for the filtration of a number of fuel additives that are filtered up to 110°C. Improved batch throughput was observed in conjunction with excellent filtrate quality and no cartridge deformation

CONCLUSION

If you are looking to improve your process in terms of health & safety, increased process volume and quality, the **VisClear II** is a proven performer against old technology RBC products. The ability to install any of the **VisClear II** products into the **SupaClean** self-contained format also brings the benefit of reduced operator exposure and the possibility to re-use filters that have not been fully exhausted, further improving process economics.

If you would like further information on the new **VisClear II** range contact your local Amazon Filters Ltd contact or visit www.amazonfilters.com/industry/chemicals-solvents-resins

⁽¹⁾ *Micro-Klean™ is a trademark of 3M corporation*

⁽²⁾ *Probond™ is a trademark of Parker Corporation*

AMAZON FILTERS LTD.

Albany Park Estate, Camberley, Surrey, GU16 7PG, ENGLAND

Tel. +44 (0) 1276 670 600 Email. sales@amazonfilters.co.uk Web: www.amazonfilters.com