

Stabifil™

Convenient, Robust and Economic Stabilisation of Beverages

Porvair is a leading manufacturer of porous polymeric materials and filter cartridges. Stabifil™ has been developed as unique technology that is at the interface of Porvair's filtration and porous material technology. The unique manufacturing process allows contact between the adsorbent and the beverage to be at its optimal.

The product can be manufactured in the format of a filter cartridge and will fit into most industry standard housings used in the food and beverages industry; thus providing an economic means by which the stabilisation process can be integrated into the processing of beverages.

Stabifil™ is highly flexible due to the robustness of the composite material, which enables it to be easily incorporated into any process where beverage stabilisation is required.



Applications

- **Beer and Wine Stabilisation**
Removal of haze-active polyphenols to allow beer to be stored and minimise reduction in clarity. Reduce chill haze in beers that are served extra-cold.
- **Spirits**
Reduction of haze caused by trace amounts of polyphenols prevalent in raw materials e.g. brandy.
- **Vinegar**
To ensure a clear and stable product by removing trace amounts of haze-active polyphenols.
- **Fruit Juice**
To enable a clear product to be manufactured and stored. Apple juice, coconut juice and grapefruit juice are typical applications.
- **Pure water supply systems**
To remove astringency and improve the product's taste in 'real' iced teas.



Features and Benefits

- **Highly efficient**

Ideal contact between the beverage and the adsorbent allowing high flow rates and minimal contact time.

- **Easy regeneration**

Hot caustic regeneration in a safer and more environmentally-friendly format, with easy integration into caustic regeneration processes.

- **Robust characteristics**

Higher pressure drops are feasible with no hysteresis and damage as compared to powder beds.

- **Clean and safe process**

No requirement to handle loose powder with associated risks to operators, equipment damage and loss of adsorbent.

- **Rapid replacement**

Rapid replacement of cartridges, saving downtime between batches; there is no requirement to build a powder bed.

- **Flexible and dynamic stabilisation**

Degree of stabilisation required can easily be altered by changing the flow rate to increase or decrease the contact time between the adsorbent and the beverage at any stage during the process.

- **Capacity is easily increased at minimal cost**

More processing capacity or higher stabilisation are simply achieved by increasing the height or number of cartridges.

- **Accurate and reproducible**

Polymer matrix and adsorbent are precisely manufactured to ensure the dosage is accurate to minimise batch-to-batch variation.

- **Minimal loss of beverage in adsorbent media**

The beverage is easily expelled from the matrix, which has low liquid retention properties.

- **Low Capital Cost and Investment**

Widely available low cost filter housings available can be used to house the cartridges. A minimal amount of technical training is required to use the cartridge.

Cartridge Construction

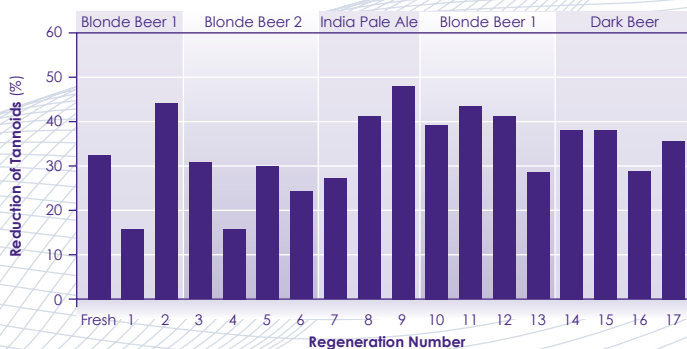
Stabilfil™ cartridges are constructed from materials proven to be non-toxic and meet international legislation including EC10/2011 for food contact, USP VI and FDA CFR Title 21.

The cartridges are built using technology that is unique to Porvair's filter cartridges and porous polymers.

No glues or resins are used to bond the adsorbent, polymer or cartridge hardware.

Product Evaluation

Below is a chart showing tannoid reduction of a selection of beers dosed at an equivalent of 25g/hl of adsorbent.



Data generated with an Ashland Tannometer.

A number of different types of beers were processed through a scaled down Stabilfil™ filter comprised of a Porvair S-type filter module. A specific flow rate of 20hl/hr/m² was used, with a contact time between the adsorbent and beer of just 12 seconds. The beer was processed within 20 minutes and rapidly regenerated *in-situ* with caustic cleaning followed by a phosphoric acid wash.

A 17-fold regeneration of the Stabilfil™ cartridge indicated no loss of stabilisation effect; furthermore, no powder was present in any of the processed beer.

porvair
filtration group

Porvair Filtration Group Ltd.

1 Concorde Close
Segensworth
Fareham
Hampshire
PO15 5RT
UK

Tel: +44 (0)1489 864330
Fax: +44 (0)1489 864399
Email: info@porvairfiltration.com

Porvair Filtration Group Inc.

10190 Maple Leaf Court
Ashland
Virginia 23005
USA

Tel: +1 804 550 1600
Fax: +1 804 550 3262
Email: infoUS@porvairfiltration.com

www.porvairfiltration.com

Porvair is a registered trademark of Porvair plc.
Stabilfil is a trademark of Porvair plc.

© Copyright 2013. Porvair Filtration Group Ltd. All rights reserved.

Whilst every effort has been made to ensure the accuracy of this document, due to continuous product development, the data contained is subject to constant revision and Porvair Filtration Group Ltd. reserves the right to change, alter or modify its contents.