polyclar™ plus 730 single-use balanced beer stabilizer



Polyclar Plus 730 single-use balanced beer stabilizer is an optimized blend of polyvinylpolypyrrolidone (PVPP) and silica xerogel. It is a single-use product offering a highly effective means of preventing non-biological haze in beer.

The combined use of PVPP and silica gel provides a balanced stabilization of both haze-producing constituents, preventing the protein-polyphenol complexes from forming.

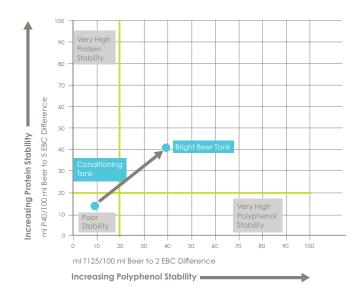
Key Benefits

Polyclar Plus 730 single-use balanced beer stabilizer represents a significant development in preserving the quality and character of beer after packaging. It offers the following key benefits:

- Single-use stabilizer
- Simultaneous removal of proteins, tannoids and polyphenols
- Optimized ratio for preventing chill and permanent haze
- Enables flocculation of hydrated xerogel particles
- Improved material dispersion and transfer
- No settling of slurry at the bottom of tanks
- High adsorptive capacity for haze-forming precursors
- No negative impact on foam, flavor or other quality parameters
- O Longer filter run lengths compared to silica alone
- Completely insoluble in beer
- No labeling required



Balanced Polyphenol and Protein Stabilization





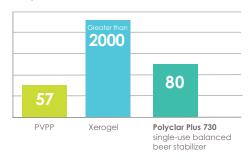


Methods of Use

Polyclar[™] Plus 730 single-use balanced beer stabilizer is made up as an 8% to 12% slurry in de-aerated water. The minimum recommended hydration time is 60 minutes and the slurry should be kept constantly agitated to ensure proper hydration and mixing. Sparging with $\rm CO_2$ may be used in the dosing vessel to minimize oxygen pickup.

The Polyclar Plus 730 single-use balanced beer stabilizer slurry may be added during transfer from fermentation to maturation or directly to the maturation vessel.

Dispersion Characteristics



Inversions required to re-disperse 10% slurries after 24 hours of sedimentation.

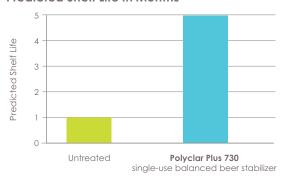
Superior dispersion characteristics of Polyclar Plus 730 single-use balanced beer stabilizer results in more uniform beer treatment and less residue in dosing tank.

It is usually added to the beer stream en route to filtration, via a separate stabilizer-dosing tank, or by addition to the diatomaceous earth (DE)/ Kieselguhr slurry tank for combined dosing with filter aid. The use of a trap filter after the DE filter is recommended.

Polyclar Plus 730 single-use balanced beer stabilizer is effective with a contact time of a few minutes. However, for maximum benefit a contact time of 10 minutes is recommended.

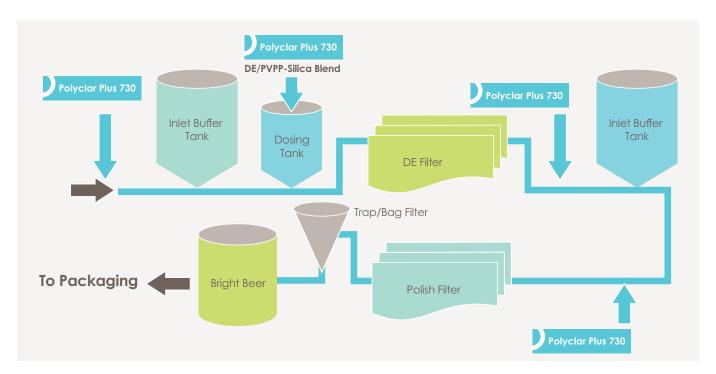
This can be achieved with proportional dosing of the stabilizer into the beer stream on entry into the maturation vessel or prior to the inlet buffer tank.

Predicted Shelf Life in Months



Improvement in predicted shelf life of American lager treated with Polyclar Plus 730 single-use balanced beer stabilizer at 40 g/hl.

Blue Arrows Indicate Possible Injection Points for Polyclar Plus 730 Single-Use Balanced Beer Stabilizer





Dosage Rates

The exact dosing rate for Polyclar™ Plus 730 singleuse balanced beer stabilizer is dependent upon the brewing raw materials used, process conditions and the shelf life requirement.

The usual dosage level range for Polyclar Plus 730 single-use balanced beer stabilizer is 15 to 100 g/hl (4 to 26 lb/100 US bbl). Typical examples are shown in the table:

Beer Type	Addition Rate (g/hl)
Strong beers > 7% alcohol	20-100
All malt lagers	20-50
All malt ales	20-80
Malt/adjunct lagers	15–50
Keg beers	10-40

Quality, Safety and Service

Quality

Polyclar stabilizer products are manufactured to internationally recognized quality standards. Details are available upon request.

Regulatory

PVPP is permitted for use in beverages in all countries with regulations covering the use of additives and process aids. Always seek guidance from your local regulatory authorities.

Safety

Safety Data Sheets are available upon request.

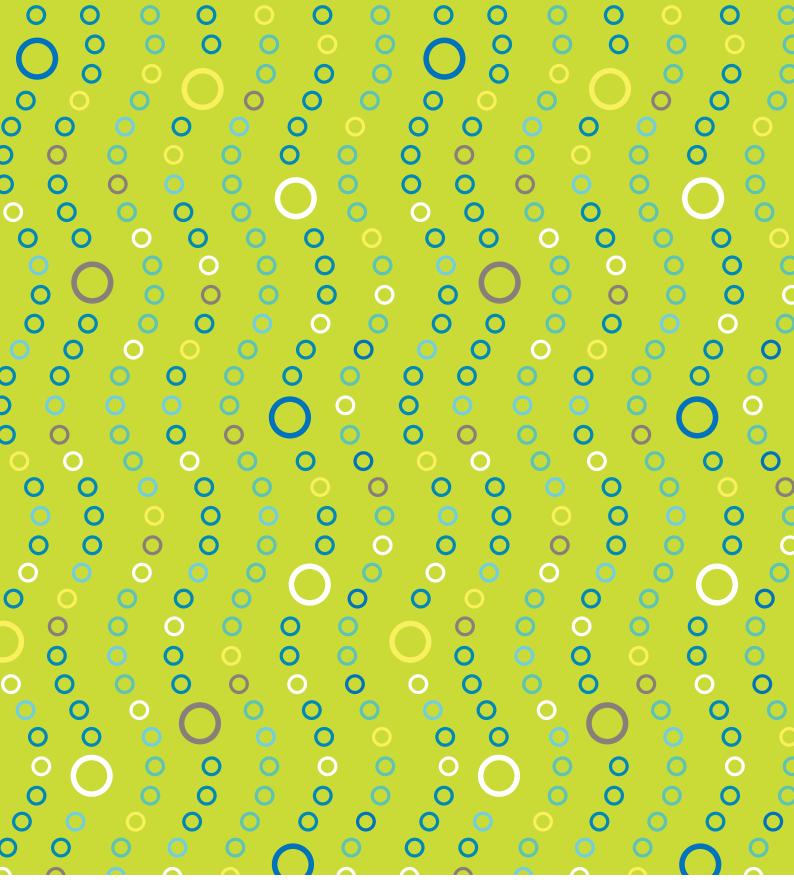
Technical Support

Technical support for Ashland's beverage product portfolio is provided by a team of dedicated industry specialists, from locations in Europe, the U.S. and Asia. For further information on the use of our products, please contact your local Ashland representative or authorized distributor.

Ashland also supplies products and services to the wine, brewing and wider food and beverage industries. We are always solving stability and clarifying challenges to introduce innovative new products to better serve our increasing number of customers in these markets.







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