

# ALPHACLAR S (ALS 511)

Alphaclar S is a single –use cross linked polyvinylpyrroidone (PVPP). It is a colloidal haze stabilizer which can increase the shelf life of beer. Alphaclar S absorbs the haze-active polyphenols which would otherwise react with haze-active proteins in filtered beer to form colloidal haze during storage.



## PRINCIPLE

Beer contains polyphenols which are derived from hops and malt. The smallest (haze active) polyphenol molecules and the smallest (haze-active) protein molecules will pass through the filter. At first the beer may be bright but gradually the polyphenols will polymerize due to oxidation. Once they reach a certain size they can react with the haze-active proteins to form colloidal haze which is measurable and visible. Eventually the colloids can become large enough for them to sediment. Alphaclar S absorbs the polyphenols via hydrogen bonding. As PVPP is insoluble, beer filtration will remove the haze-active polyphenols which have been absorbed onto the PVPP. This takes away one side of the equation in colloidal haze formation, thereby improving the stability of beer.



## BENEFITS

Increases beer shelf-life due to preventing colloidal haze formation.

Only the specific haze-active polyphenols are removed.

PVPP is insoluble so its removed by filtration and therefore is a processing aid, which is no required to be listed on labels.



## QUICK NOTES

### BENEFITS

Increased beer shelf life

Only specific haze -active polyphenols removed

Insoluble - completely removed by filtration

### TREATMENT RATE

30-50 g/hl

### APPLICATION

Made up as a 10% suspension in deaerated liquor and added in-line

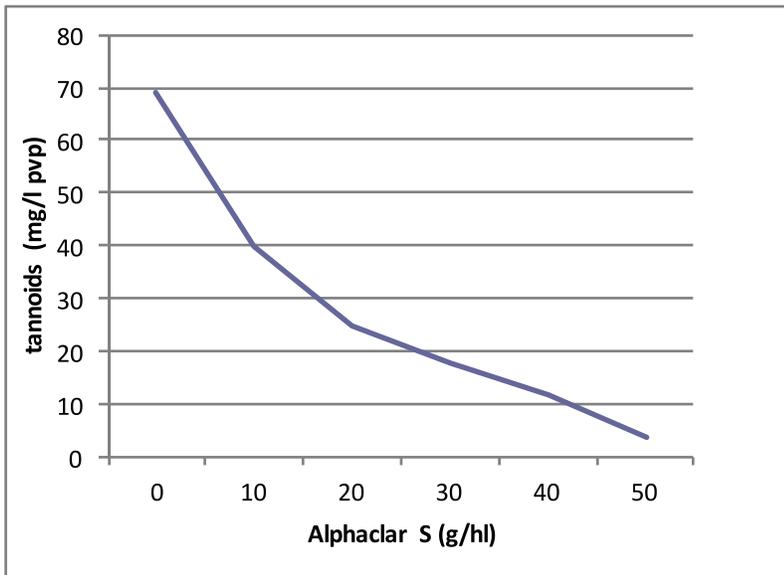


## TREATMENT RATES

The typical treatment rate is generally 30 – 50 g/hl

The level of polyphenols in the beer will determine the required addition rate.

The correct addition rate is best identified by performing a lab-scale optimization test and measuring the effects on the haze-active polyphenol levels.



## APPLICATION

Alphaclar S can be added to beer in-line during the transfer from fermenter to maturation tank or into the beer stream along with the diatomaceous earth bodyfeed filter powder as it is being presented to the filter.

Alphaclar S should be made up as a (stirred) 10% suspension in de-aerated water and left to swell for 1-2 hours before adding to the beer if it is being added just prior to filtration.

### REGULATORY

Alphaclar S can be used as a processing aid as it meets the requirements of EU General Food Law (Regulation (EC) No 178/2002 (as amended))

JECFA GSFA 14.2.1 permits PVPP addition to beer under GMP

Alphaclar S meets the requirements of FCC.

### CONTACT US

For more information, please visit us at [www.lallemandbrewing.com](http://www.lallemandbrewing.com)

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