



TECHNICAL DATA INFORMATION SHEET

REVISION: 04/06

KALSEC®

TETRALONE® REDUCED HOP EXTRACT

Product Code: 46-12

DESCRIPTION

- Tetra-hydroisoalpa acids in an aqueous solution.
- Concentration specification is $9.5\% \pm 0.4\%$ tetra-hydroisoalpa acids by HPLC.

APPLICATIONS

- Adds organoleptic bitterness to beer – approximately 1.7 times that of iso-alpha acids.
- Will not cause formation of light-struck character, providing there is no source of unreduced iso-alpha acids introduced during the brewing process.
- Effective beer foam and cling enhancer, which varies depending upon the foam proteins present in the beer.

HOW TO USE

- Designed for injection undiluted into post-fermentation beer.
- Can be diluted by adding to uncarbonated, demineralized water adjusted using potassium hydroxide to a pH level of 10 – 11 while continuously stirring.
- Can achieve bitterness utilization of approximately 70% – 80%.
- Brewkettle addition is not recommended.

PRODUCT INFORMATION

- Product performance is not affected by its pH.
- Can be stored at a temperature range of 2°C – 40°C for the shelf life of the product. The ideal storage temperature is 4°C – 10°C. Extreme temperature variations may cause some precipitation of the product and therefore should be avoided.
- Should be part of an inventory control system, which will assure use in less than 18 months.

PATENTS

- Made according to U.S. Patent 5,296,637 and corresponding patents elsewhere.

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