



# FLEX®

## CHARACTERISTICS

FLEX® offers the brewer a flowable, concentrated hop product that provides efficiency and flexibility in the brewhouse. FLEX® is an all-natural product produced from hops that retains the bittering potential of raw hops. Compared to raw hops or hop pellets, FLEX® represents a convenient and concentrated alternative with excellent stability. In the United States, hop extracts are generally-recognized-as-safe (GRAS) in accordance with US FDA regulation 21 CFR 182.20.

## PRODUCT SPECIFICATIONS

<b>Description</b>	Depending on extraction conditions, the color of FLEX® can vary from yellow to amber. FLEX® is flowable at room temperature.
<b>Density</b>	approx. 0.8 – 1.0 g/mL
<b>Sum of <math>\alpha</math>-Acids and Iso-<math>\alpha</math>-acids</b>	65% +/- 5%

## QUALITY AND FOOD SAFETY

BarthHaas maintains quality management systems registered to the ISO 9001 standard, as well as food safety management programs based on internationally recognized (HACCP) principles. Please refer to our website ([www.barthhaas.com](http://www.barthhaas.com)) for more information on our systems and programs.

## PRODUCT USE

For efficient provision of bitterness, add FLEX® to the kettle at the beginning of the wort boil. FLEX® provides better utilization of  $\alpha$ -acids when compared to hop pellets, typically within the range of 25% - 35%. The quantity to be added is calculated using the  $\alpha$ -acid content and the estimated utilization. Actual utilization may vary depending on plant and processing parameters. If oil separation and/or product stratification occur, it is recommended that the product be warmed to a range of 30-35 °C and stirred or shaken to homogenize before use. These issues are more common if the product has been stored at temperatures below 13 °C.

## PACKAGING

FLEX® is supplied in 2 kg or 10 kg containers. Containers meet all food industry packaging regulations.

## STORAGE AND BEST-BY RECOMMENDATIONS

FLEX® should be stored at 13–24 °C (55–75 °F). FLEX® is best if used within 36 months after processing. FLEX® remaining in a previously-opened package can be used up to 12 months after opening under two conditions: the package is properly stored, and the total age of the product does not exceed 36 months.



## ANALYTICAL METHODS

The concentration of hop acids in FLEX® can be measured by:

o High Performance Liquid Chromatography (HPLC), using the current ICE standard, according to the EBC 7.7 or the ASBC Hops-14 methods.

## SAFETY

Any material that comes into contact with skin should be washed off with soap and water. For more information, download the relevant Safety Data Sheet (SDS) from our website.

## TECHNICAL SUPPORT

BarthHaas will be pleased to offer any help and advice on the use of FLEX® in brewing applications.

E-Mail: [Brewingsolutions@barthhaas.de](mailto:Brewingsolutions@barthhaas.de)