

# HopGain<sup>®</sup>



## **HopGain<sup>®</sup> Haze**

### **General:**

HopGain<sup>®</sup> Haze is a natural 100% hop derived aqueous extract prepared from hop cones or pellets by innovative extraction and distillation methods designed to give a stable haze to your beverage.

### **Characteristics:**

HopGain<sup>®</sup> Haze provides an easy to use, reproducible method of adding haze to beer without the addition of hops or other associated adjuncts traditionally used in this process.

Light stable: All products are free from iso- and alpha acids and can be used with any beer packaging type.

Reproducible: HopGain<sup>®</sup> Haze is a standardised product that will allow the addition of consistent haze as required.

Easy handling: HopGain<sup>®</sup> Haze is a standardised aqueous solution for dosing post fermentation without the need for additional dilution or mixing prior to addition.

Nature: Natural, clean label and allergen-free: 100% extract from hops and by physical processes.

### **Product Specifications:**

Description: Amber to brown aqueous hop extract. No visible colouration to the beer up to maximum concentrations tested at maximum 200g/hL.

Odour: Characteristic hoppy. May impart synergistic effects with beer matrix.

Specific gravity (20°C) 0.900 – 1.100

### **Product use:**

HopGain<sup>®</sup> Haze is used to impart haze to your beer. The replacement of heavily flocculating yeast strains will reduce the yeast slurry in fermenters and thus improve technical processing. Likewise, also applied for any material previously intended for haze functionality, such as adjuncts or malt bill excess. As such, it will improve beer consistency, reduce microbial risk and reduce beer loss through absorption.



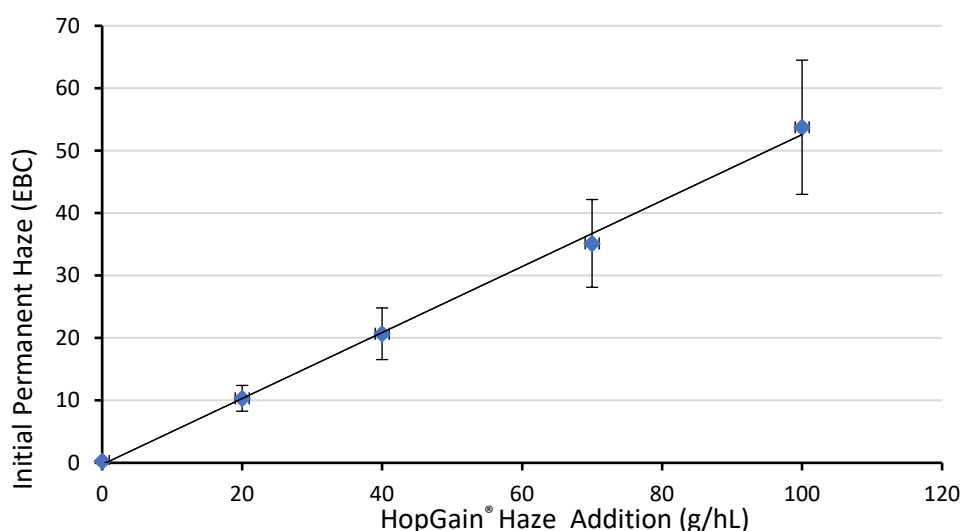
**Product Development:**

**Dose rate:**

Dosage will be dependent on the final haze intensity required in application. The following measures are indicative and meant to support brewers with earlier bench trials. Turbidity measurements reported here have been analysed based on the official EBC 9.29 - Haze in Beer: Calibration of Haze, following ISO 9001 compliancy.

**TABLE 1.** HopGain® Haze recommended dosages and indicative haze units (EBC/NTU) for representative commercially available beer types as reference. (NTU equals EBC\*4)

BEER SAMPLE	Permanent Haze (EBC)
Reference: NEIPA	50 ± 10
Reference: HAZY IPA	30 ± 6
Reference: Lager	0.40 ± 0.08
Lager beer + HopGain® Haze [20g/hL]	10.33 ± 2.07
Lager beer + HopGain® Haze [40g/hL]	20.67 ± 4.13
Lager beer + HopGain® Haze [70g/hL]	35.11 ± 7.02
Lager beer + HopGain® Haze [100g/hL]	53.75 ± 10.75



**Figure 1.** Concentration of HopGain® Haze added onto clear lager beer and resulting total haze (EBC units)

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## **How to dose:**

HopGain<sup>®</sup> Haze is fully soluble in beer and are intended for addition to fined or filtered beers. They can be dosed into finished beer without the need for subsequent filtration, with significant stirring/agitation required for maximum effect. The optimum way of dosing HopGain<sup>®</sup> haze is with an in-line dosing system into the beer stream on transfer to the bright beer tank or racking vessel.

HopGain<sup>®</sup> Haze can also be added direct into the finishing vessel prior to transferring the beer, where the transfer provides mixing. For dosing direct to casks, we recommend doing so either during the racking process or into the full cask. HopGain<sup>®</sup> Haze should be added separately from cask finings.

## **Packaging:**

Standard packaging for HopGain<sup>®</sup> Haze is a 1kg, 10kg or 20kg poly drums.

## **Storage and shelf life:**

HopGain<sup>®</sup> Haze is stable in unopened containers for at least 12 months in the packaging supplied and should be stored at 5 - 25°C. Once opened they should ideally be used within 1 month. A slight precipitate might be observed over time, please take care when pouring to avoid the addition of precipitate.

## **Regulatory**

HopGain<sup>®</sup> Haze is made using clean label technologies, without solvent residues or chemical reagents. In the European Union they may be classified as natural hop flavouring or hop extract according to the flavouring legislation (EU1334/2008EC).

In the USA, HopGain<sup>®</sup> Haze is classified as a natural extractive, since essential oils, oleoresins and natural extractives (including distillates) from hops are GRAS for their intended use (21.C.F.R. § 582.20)