

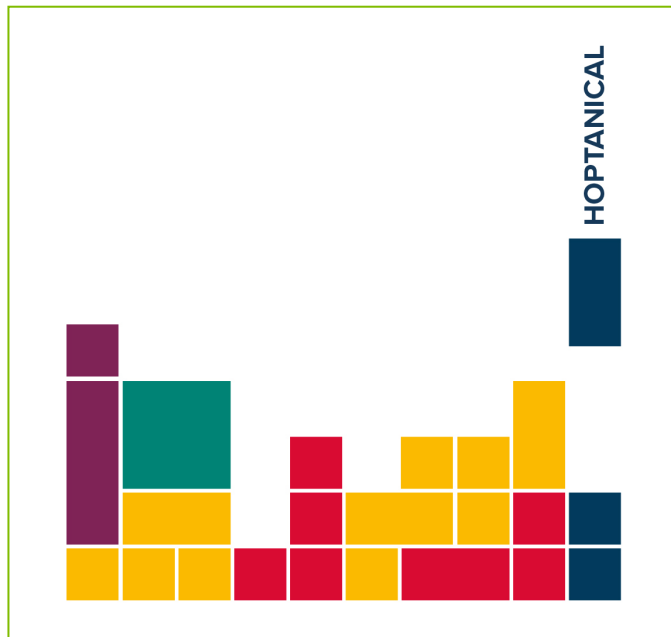
HOP OIL TYPE HOPTANICAL

OVERVIEW

Hop Oil Type HOPTANICAL is produced by conventional hop extraction with subsequent fractionation by means of distillation. On top of a purified hop oil, flavor extracts of various botanicals (herbs, spices, etc.) are added.

Type HOPTANICAL has been specifically developed for additions prior to filtration and has an excellent aroma recovery in beer and beverages.

Type HOPTANICAL is mainly used to achieve unique flavors in specialty brands, ranging from citrusy and fruity flavors to herbal and spice-like aroma impressions.



SPECIFICATIONS

Short description	composition of hop oil and natural botanical extracts diluted in a blend of propylene glycol and ethanol
Key compounds:	Linalool 500 ppm (± 50) Ratio Linalool / Myrcene > 5 Ratio Linalool / Caryophyllene ≤ 0.1 Ratio Linalool / Humulene ≤ 0.1 Ratio botanical extract / hop oil dep. on Type HOPTANICAL
Bittering substances	not detectable
Density	ca. 1.0 g/ml (20 °C / 68 °F)
Viscosity	ca. 46 mPas (25 °C / 77 °F)

For batch-dependent information, please refer to the enclosed certificate of analysis.

PROPERTIES

APPEARANCE

Type HOPTANICAL is a nearly colorless to light green, transparent or slightly turbid liquid.

FLAVOR

Depending on the quantity added and the type of beer and beverage, Type HOPTANICAL can pronounce the spicy hop aroma in combination with non-hop related citrusy, fruity, herbal and spice-like flavors. Type HOPTANICAL has little influence on the sensory bitterness of beer and beverage. During beer aging the aroma components of Type HOPTANICAL remain stable and contribute to overall flavor stability.

UTILIZATION

Type HOPTANICAL contains linalool with an excellent recovery rate, which can be close to 100 %. The non-hop based natural aroma is transferred in a high yield to finally pronounce the overall flavor.

QUALITY

All Hopsteiner® products are processed in facilities which fulfill internationally recognized quality standards. A monitoring system for residues is in place.

PACKAGING

Our products are delivered in their respective recommended standard packaging. Alternatives may be possible upon customer request.

Standard packages of our processing plants in the USA (US) and Germany (DE) are:

- Aluminum bottles 0.5 and 1.0 kg (DE)

The product is supplied as a dilution in a blend of propylene glycol and ethanol.

USAGE

DOSAGE

The quantity to be used is determined by the brewer and depends on the time and point of the addition. The hop oil dosage should be based on ml of supplied product per hl of beer or beverage. The typical dosing range for beer is **5 – 20 ml / hl**. This range is intended for orientation only; actual additions will depend on the impression and intensity of the aroma desired. Trials performed by injecting the product into bottled beer or beverage with a microliter syringe are helpful for determining the quantity of Type HOPTANICAL required.

APPLICATION

Shake the packaging well before use. Type HOPTANICAL can be added at different stages on the cold side of beer production, typically prior to filtration. For the highest possible yield, a direct addition into the beer or beverage stream prior to filtration is recommended. This enables the Type HOPTANICAL to dissolve in the beer or beverage without changing its flavor.

STORAGE

The recommended storage temperature in the original unopened packaging is 1 - 10 °C.

BEST BEFORE DATE

Under the recommended storage conditions, the shelf life from the date of production/ packaging is at least 1 year.

Opened containers should be consumed as soon as possible.

SAFETY

Ensure good ventilation of the workplace and wear personal protective equipment. Avoid contact with eyes and skin. Do not inhale vapors or dusts. For full safety information, please refer to the relevant Hopsteiner® safety data sheet.

ANALYTICAL METHODS

International approved methods listed in committees such as ASBC or Analytica-EBC using current standards are applied.

PRODUCT ANALYTICS

Hop oil components

- Analytica-EBC 7.12 (GC)
- ASBC Hops-17 (GC)

TECHNICAL SUPPORT

We are pleased to offer assistance and advice on:

- safety data sheets
- support for brewing trials on a pilot or commercial scale
- analytical services and information about analytical procedures

Disclaimer: The information provided in this document is believed to be correct and valid. However, Hopsteiner® does not guarantee that the information provided here is complete or accurate and thus assumes no liability for any consequences resulting from its application.

Simon H. Steiner, Hopfen, GmbH Mainburg, Germany Email: info(at)hopsteiner.de Phone: +49 (0) 8751 8605 0	S.S. Steiner Inc. New York, USA Email: sales(at)hopsteiner.com Phone: +(1) 212 838 8900	Steiner Hops Ltd. Guildford, England Email: enquiries(at)hopsteiner.co.uk Phone: +(44) 1992 572331	Hopsteiner Trading (Zhuhai) Co., Ltd. Zhuhai, PRC Email: info(at)hopsteiner.com.cn Phone: +(86) 756 322 3340
---	--	---	---
