



*Belgian Malts that Make Your Beer So Special*

## MINSTREL

Minstrel is a low trellis wilt resistant variety from the Charles Faram Hop Development Program.

> Aroma Hop <



### Technical Data

#### **ACID COMPONENTS**

Alpha Acids	5.0 – 7.0% w/w
Beta Acids	3.0 – 3.5% w/w
Cohumulone	22 – 26% of alpha acids

#### **OIL COMPONENTS**

Myrcene	22.0 – 25.0% of whole oil
Humulene	1.0 – 4.0% of whole oil
Caryophyllene	1.0 – 5.0% of whole oil

#### **CHARACTERISTICS**

Minstrel is a low trellis wilt resistant variety from the Charles Faram Hop Development Program. Tolerant to powdery mildew. High Farnesene gives beers brewed with Minstrel great fullness of flavour and depth.

#### **TYPICAL BEER STYLES**

Lagers

#### **AROMA**

Spiced berries with orange citrus.

#### **POSSIBLE SUBSTITUTIONS**

Jester



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#### **BREEDING PROPERTIES:**

Tolerant to powdery mildew. It combines classic British aroma with a citrus twist. Useful as copper and dry hop additions.



#### **BREWING TIPS**

- Here is some guidance for your homebrewing hop additions:
- For bittering, add hops as desired no later than 15 minutes from end of the boil.
- For aroma, add hops 5-15 minutes from end of the boil.
- For flavor, add hops 2-5 minutes from the end of the boil.
- For dry-hop character, add directly to the primary or secondary fermenter.

#### **STORAGE**

Hops have three main enemies: heat, light and oxygen.

Heat accelerates the chemical breakdown of hops including both aromatic oils and the precious alpha acids that provide most of the bitterness in beer. Always store them in the freezer at a temperature between -1 and -21°C (30F to -5F).

Hops exposed to light will break down rapidly, leaving off flavors in your beer. When possible, store your hops in a dark place and avoid exposure to sunlight.

In oxygen's presence hop oils and alpha acids will oxidize. Oxidized alpha acids lose their bitterness, and old hops will take on a "cheesy" aroma. The best container is a vacuum sealed oxygen barrier such as a vacuum packed foil pouch, typically made from a layer of food grade plastic and layer of mylar.

Note: whole hops degrade faster because of the larger surface area exposed to air. Pellets are highly compressed, and therefore age more slowly than whole hops. They also take less space and are easier to vacuum pack, which is why they are often used in home brewing and micro brewing.



**Type T90 Hop Pellets**



**Type Leaf Hops**

# **Stop Searching. Start Brewing.**

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