VANGUARD

BREWING QUALITY
Provides excellent aromatic notes, along with a very low cohumulone content. Used in Lager, Pilsner, Bock, Kölsch, Wheat, Munich Helles, Belgian-Style Ales.

ORIGIN / HISTORY
USA origin. A triploid hop, similar to Hallertauer Mittelfrüh.

AGRONOMICS
Resistance to hop downy mildew similar to that of the cultivars Nugget and Willamette.

ACID COMPONENTS
Alpha Acids  5 – 7% w/w
Beta Acids   6 – 7% w/w
Cohumulone  14 - 16% of alpha acids

OIL COMPONENTS
Total Oil    0.9 – 1.2 mls/100 grams
Caryophyllene 12 - 14% of whole oil
Farnesene    <1% of whole oil
Humulene     45 - 50% of whole oil
Myrcene      25 - 35% of whole oil

Possible Substitutions: Hersbrucker, Mount Hood, Liberty