



# HVG VACUPACK-HOPS

## PRODUCT SPECIFICATION

### MANUFACTURER & SUPPLIER

Name: **HVG Hopfenverwertungsgenossenschaft e.G.**  
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### CUSTOMS TARIFF CODE

1210.10.0000 (Hop cones, neither ground nor powdered nor in the form of pellets)

### MEANING OF CODE EXPLAINED BY EXAMPLE

- **32 DE 2020:**  
32 = N° of certification center according to "List of hop certification centers and their code numbers"; Article 24, Regulation (EC) No 1850/2006; DE: Germany; Harvest 2020
- **HHMG:** Origin = Hallertau; Variety = Hallertauer Magnum.  
Name of the variety according to the "List of world hop varieties of the International Hop Growers` Convention (IHGC)" in its current version
- **Batch number:** consecutive number for each produced batch. With that code we guarantee that we can trace a hop lot back to the hop-grower without any gaps.

### QUALITY AND FOOD SAFETY

- HVG e.G. is certified according DIN ISO 9001:2015 since the year 2000
- HACCP

### PRODUCT PROPERTIES

VacuPack-Hops contain all-natural substances of the dried female flower of the hop plant (*Humulus Lupulus*) in their chemical and physical unchanged form. They contain all of the aromatic substances (hop oil), polyphenols and bittering resins (humulones and lupulones) of the whole hop cones. The overall content of these components is dependent on the hop variety and crop singularities. Compared to RB-60 whole hops VacuPacks provide several advantages:

- Reduced bulk / Higher bulk weight  
--> Reduced transport cost & storage costs
- Better storage stability due to Inert packaging conditions
- Lupulin gland are crushed cause of compressing  
--> Better usability and higher yields in the brewhouse



## PHYSICAL-CHEMICAL DETAILS

Description	Unit	Value
$\alpha$ -acids (resins)	% w/w*	2 – 22
$\beta$ – acids (resins)	% w/w*	1 – 10
Essential oils	ml/ 100 g*	up to 4
Appearance	*	Dull green with a typical hop aroma
Specific weight	kg/ m <sup>3</sup>	500 ± 100
Moisture	%	< 10

\*depending on hop variety and crop year

## PACKING

The compressed hops are packed in aluminium laminated foils which are vacuumed prior to sealing. The package weight is usually in the range of 5 kg (11 lbs) net weight. Smaller packing units are possible following customer request.

## PRODUCTION PROCESS AND PROCESS SPECIFICATIONS

HVG VacuPack-Hops are made from whole leaf hops by drying and afterwards compressing them under pressure.

## PRODUCT USE

For a most effective use it is recommended to shred or loosen the compressed hop material before dosing. Hops provide aroma and bitterness in beer. Traditionally hopping takes place in the wort kettle, but HVG VacuPack-Hops are well suited for “dry-hopping” preferably after fermentation as well. The possible time for dosing varies so from first-wort hopping, via additions directly before casting, up to direct aroma hopping in the whirlpool or in the fermentation/lager tank.

For further information please visit [www.hvg-germany.de](http://www.hvg-germany.de)

## STORAGE / STABILITY

Brewing constituents in VacuPack are best protected by storing cold at 1 °C to 5 °C (34 °F to 41 °F). Out of quality reasons HVG VacuPack-Hops should be used as soon as possible after opening the packaging. Hop constituents oxidise in contact with air, which leads e.g. to a deterioration of bitter acids and essential oils. Recommended storing conditions to reduce the loss of bittering constituents:

Temperature	Stability
At 10 – 15 °C (50 – 59 °F)	up to 2 years (in unopened, original packages)
At 0 – 5 °C (32 – 41 °F)	up to 5 years (in unopened, original packages)



Cardboard boxes may deteriorate in strength and become deformed due to factors in the storage location such as humidity, multilayer stacking, and storage duration. Note that the maximum number of cardboard boxes that may be stacked safely differs considerably depending on the storage conditions.

## TRANSPORTATION

In order to guarantee the quality of the product until delivery at the brewery, preventive measures have to be implemented during transportation in order to avoid an exposure of HVG Pellets to temperatures exceeding 25 °C (77 °F) for more than 3 to 4 days. If this temperature requirement cannot be met, we strictly recommend to use a refrigerated container for overseas transportation with a temperature setting of about 4 °C (39 °F). High temperatures during a prolonged period of time may cause an inflation of the packaging due to a volume increase of the gases contained therein and may lead also to an inert degradation of the value-giving compounds of the hops. Under extreme exposure some foils may even break open exposing the hops to air leading to a total loss of value giving compounds.

## HEALTH AND SAFETY

Use protective mask where dust is generated. See MSDS.

## ANALYTICAL METHODS

For HVG VacuPack the following analysis methods can be applied:

Method	Usage
EBC 7.5	Bitter Substances in Hops and Hop products by Lead Conductance Value
EBC 7.7	Alpha and beta acids in Hops and Hop Products by HPLC (ASBC Hops-14)
ASBC	Hops-6 Spectrophotometric method
EBC 7.10 & ASBC Hops-13	Hop oil concentration

## OTHER INFORMATION

- The product is accompanied by the Phytosanitary Certificate, which states that the product has been produced according to the national health regulations.
- The above information is based on the current state of knowledge of our product at the time of publication and is furnished without warranty of any kind.
- The user must satisfy himself that the product is entirely suitable for his purposes.
- HVG VacuPack-Hops are a natural product and are not treated with any kind of additives. HVG VacuPack-Hops are therefore free of any artificial food additives.