

# Material Safety Data Sheet



Trade name: HVG-Hops Pellets  
Product Code: PEL/PE90/A-45-30  
Version: 3.0 / EN

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## HVG HOP PELLETS

### MATERIAL SAFETY DATA SHEET

(according to the EEC/ISO standards)

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## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

- **Name of the material or preparation:**  
Product code: PEL/PE90/A-45-30  
Customs tariff code: 1210 20 10, 1210 20 90  
Product name / commercial name: HVG-Hops Pellets
- **Details on manufacturer (partly owned by supplier):**  
Name: Hopfenveredlung St. Johann GmbH  
Address: Mainburger Str. 15, 93358 St. Johann (Germany)  
Telephone: +49-9444/878 0  
Telefax: +49-9444/878 178  
e-mail: contact@hopfenveredlung.de
- **Details on supplier:**  
Name: HVG Hopfenverwertungsgenossenschaft e.G.  
Address: Kellerstr. 1, 85283 Wolnzach (Germany)  
Telephone: +49-8442/957-100  
Telefax: +49-8442/957-169  
e-mail: contact@hvg-germany.de
- **Date of preparation of MSDS:** 1999-03-12
- **Date of revision of MSDS:** 2021-03-16

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Chemical characterisation

HVG-Pellets are a natural product based on the flower of the hops plant (*humulus lupulus*) in their natural chemical unchanged form. The Pellets can be produced from the different existing hop varieties, and can be ordered into:

- normal pellets
- lupulin enriched hop pellets.

This MSDS applies for all the varieties and products.

According to the EBC (European Brewery Convention) Manual of good practice for Hops and Hop Products (ISBN3-418-00758-9) the process of pellets production out of the hops is the following:

“The flowers of the hop plant are cleaned from possible foreign material, dried to a moisture content of about 8 to 10 % w/w and grinded in hammer mills. The powder is homogenized in a mixing vessel a pressed in the pelletizing machines through ring dies to form the pellets (grinded and pressed flowers). The pellets are cooled and filled into aluminium laminated plastic foils under an atmosphere of inert gas (N<sub>2</sub> and CO<sub>2</sub>). The lupulin enrichment consists in the separation of a certain part of leaf fraction of the flower through sieving. This is reached by freezing the flower down to about –30 degrees, grinding it in hammer mills and separation of a part of the leaf fraction in rotating sieves. The rest of the process is the same as for normal pellets”

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## Typical characterisation of Pellets

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
Polyphenols and tannins	% w/w	3 – 6
Proteins	% w/w	up to 15
Cellulose-lingins	% w/w	20 – 50
Moisture	% w/w	6 – 10

## 3. HAZARD IDENTIFICATION

No health hazards, non-toxic in normal use

## 4. FIRST AID MEASURES

### General information:

In normal use no health hazards known. Hop Pellets can generally be recommended as safe (GRAS). In some cases, the product may be a mild irritant if it gets in contact with eyes, respiratory tract or mucous membranes.

- Inhalation: Not applicable
- Skin contact: Wash contacted area with warm soapy water.
- Eye contact: May be irritating. Wash affected eye with plenty of pure water. Seek medical attention if irritation persists.
- Oral ingestion: It is an extremely bitter substance Spit out and rinse with plenty of water  
Instructions for physician: Not applicable

## 5. FIRE FIGHTING MEASURES

- Packing: Cartons and wooden pallets are flammable. Extinguishing media foam, water or CO<sub>2</sub>
- Product: No known unusual fire and explosion hazards

## 6. ACCIDENTAL RELEASE MEASURES

Normal clean-up procedures with hot water and usual household cleaning agents

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## 7. HANDLING AND STORAGE

- Handling: No special requirements
- Storage (durability): No special precautions necessary
- Storage class: 11 Combustible solids

Out of quality reasons Pellets should be used as soon as possible after opening the packaging.

### Recommended storing conditions:

- 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)

To guarantee quality avoid heat, moisture, strong odours during storage. Pellets should not be exposed to temperatures above 20°C since it is possible that gases are formed from hop constituents. The resulting pressure increase may cause a bursting of the foils. Consequently the pellets are exposed to air and oxidation takes place resulting in a considerable deterioration of quality.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Additional information on construction of technical installations: not applicable
- Components important for workshop security (limits to be controlled): not applicable
- Personal protective equipment: If dust is generated a dust mask is advisable

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

- Form: pellets
- Colour: various shades of green
- Odour: typical hoppy

### Safety data

- pH: not applicable
- Change of state: not applicable
- Flash point: not applicable
- Flammability: not applicable
- Ignition temperature: not applicable
- Spontaneous ignition: not applicable
- Explosion limits:
  - min: not applicable
  - max: not applicable
- Vapor pressure: not applicable
- Density: 0.5 – 0.7 kg/l
- Solubility: not applicable

## 10. STABILITY AND REACTIVITY

Hop constituents oxidise in contact with air, no hazardous reactivity known. If originally sealed packages are stored at temperatures above 20°C gas formation is possible. No other hazardous reactivities known.

## 11. TOXICOLOGICAL INFORMATION

Hops Pellets used for beer brewing can generally be recommended as safe (GRAS) in accordance with US FDA 21 CFR 170.30(c) and 170.3(f).

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## 12. ECOLOGICAL INFORMATION

The product is all natural and biodegradable

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations involved for organic non-hazardous product. Packaging material (wooden pallets, cartons, foils) to be recycled.

## 14. TRANSPORT INFORMATION

### Road transport:

- Warning board: not applicable
- GGVS/GGVE-classification: not applicable
- UN-No.: not applicable

### Transport on inland waterways:

- Class/no/letter: not applicable

### Marine transport:

- Class: not applicable

### Air transport:

- Class: not applicable

### Further information:

- None hazardous product, Comply with applicable state regulations

## 15. REGULATORY INFORMATION

### Identification according to EU-regulations:

- Hazard identification: not applicable
- Product contains: not applicable
- R-phrases: not applicable
- S-phrases: not applicable
- Further information: not applicable

### National federal regulations:

- Information on workshop limit: not applicable
- Regulation on hazardous incidents: not applicable
- Regulation on flammable liquids VbF: not applicable
- TA air: not applicable
- Water hazard classification: not applicable
- Further regulations on restrictions and prohibitions: not applicable

## 16. 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.