

Material Safety Data Sheet



Trade name: HVG – IKE
Product Code: IKE – Isomerised Kettle Extract
Version: 3.0 / EN

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HVG Isomerised Kettle Extract

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: IKE – Isomerised Kettle Extract
Customs tariff code: 1302 13 00
Product name / commercial name: HVG-IKE
- 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

The HVG-IKE extract contains the non-polar substances of the flower of the hops plant (*humulus lupulus*) which have been extracted by means of supercritical CO₂ using HVG-CO₂ as the basis for the product extract. The extract is a mixture of the aromatic substances of the hops (hop oils) and the bittering resins (humulones and lupulones). According to the EBC (European brewery convention) Manual of good practice for Hops and Hop Products (ISBN3-418-00758-9) the process of producing IKE is the following:

“[Isomerized Kettle Extract is obtained by] mixing and heating pure resin extract with Magnesium Oxide. No water is added during this isomerisation process. Addition rates for magnesium oxide are typically in the range of 3% to 6% of weight of extract, for a pure resin extract containing 50% alpha acids. After completion of isomerisation, the iso-alpha-acids are present as a magnesium salt. The magnesium iso-alpha-acid salts are converted by treatment with acid to the free acids, yielding an isomerized kettle extract which exhibits handling characteristics very similar to conventional pure resin extract.”

Typical characterisation of extracts

Description	Unit	Value
α -acids (resins)	% w/w	25 – 55
β – acids (resins)	% w/w	15 – 35
Essential oils	ml/ 100 g	up to 10

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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 Extract 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:**
May be slightly Irritating. Wash contacted area with warm soapy water. Wash contaminated clothing before re-use.
- **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 and may be Irritating to mouth, throat and stomach. Drink plenty of milk or water to dilute and fruit juice to neutralise bitterness. Vomiting is possible but should not be induced
- **Instructions for physician:**
Not applicable

5. FIRE FIGHTING MEASURES

- Packing: Cartons and wooden pallets are flammable. Extinguishing media foam, water or CO2
- Product: No known unusual fire and explosion hazards

6. ACCIDENTAL RELEASE MEASURES

- Take up the extract with an absorbent material
- Place the used material in an appropriate waste disposal container for disposal according to local
- Finally, normal clean-up procedures with hot water and usual household cleaning agents

7. HANDLING AND STORAGE

- Handling: No special requirements
- Storage (durability): No special precautions necessary
- Storage class: 10 Combustible solids

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

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Recommended storing conditions:

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

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: Rubber gloves are advisable to avoid accidental contact; protective goggles are advisable to avoid accidental contact

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form: viscous extract, waxy
- Color: green to green-yellowish
- Odour: typical hoppy, resinous

Safety data

- pH: slightly acid
- Change of state: melting at 40-60°C, depending on the variety
- Flash point: not applicable
- Inflammability: not applicable
- Ignition temperature: not applicable
- Spontaneous ignition: not applicable
- Explosion limits:
 - min: not applicable
 - max: not applicable
- Vapor pressure: not applicable
- Density: 0.85 – 1.05 kg/l
- Solubility: soluble in nearly all organic solvents, water causes formation of an emulsion

10. STABILITY AND REACTIVITY

Hop constituents oxidise in contact with air, no hazardous reactivity known.

11. TOXICOLOGICAL INFORMATION

Hops Extract 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).

12. ECOLOGICAL INFORMATION

The product is all natural and biodegradable

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13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations involved for organic non-hazardous product. Packaging material (wooden pallets, cartons, emptied tins and one-way barrels) 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.