

### SECTION 1: Identification

#### 1.1. Identification

Trade name : Isomerized Kettle Extract (IKE)  
Chemical name : Hop, Humulus lupulus, ext  
CAS-No. : 8060-28-4

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Manufacturing of food

#### 1.3. Supplier

##### Manufacturer/Supplier/Importer

S. S. Steiner, Inc.  
725 5th Ave. 23 rd Floor  
New York, NY 10022 - USA  
T +1 212 838 8900

##### Email competent person

sds@kft.de

##### Manufacturer/Supplier/Importer

Simon H. Steiner, Hopfen, GmbH  
Auhofstr. 18  
Mainburg, 84048 - Germany  
T +49-(0)8751-8605-0 - F +49-(0)8751-8605-80

##### Supplier/Importer

Steiner Hops Ltd.  
185-189 High St  
Epping, Essex CM16 4BL - United Kingdom

#### 1.4. Emergency telephone number

Emergency number : S. S. Steiner, Inc.  
Phone: +1 212 838 8900 (Monday – Friday 08.00 – 17.00, Eastern Time Zone)  
  
Simon H. Steiner, Hopfen, GmbH  
Tel.: +49-8751-8605-0 (Monday – Friday 08:00 – 17:00, Central European Time)  
  
Steiner Hops Ltd.  
Phone: +44 1992 572 331 (Monday – Friday 08.00 – 17.00, Greenwich Mean Time)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Acute toxicity (oral), H302 Harmful if swallowed.  
Category 4

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H302 - Harmful if swallowed.  
Precautionary statements (GHS-US) : P270 - Do not eat, drink or smoke when using this product.  
P301+P312 - If swallowed: Call a POISON CENTER, a doctor if you feel unwell  
P330 - Rinse mouth.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Multi-constituent  
Chemical name : Hop, Humulus lupulus, ext  
CAS-No. : 8060-28-4

Name	Product identifier	%	GHS-US classification
3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one (Component)	(CAS-No.) 468-28-0	15-30	Acute Tox. 3 (Oral), H301
hop oil (Component)	(CAS-No.) 8007-04-3	3-12	Flam. Liq. 3, H226 Asp. Tox. 1, H304

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use fire fighting measures suiting the environment. Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Strong water jet.

#### 5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool closed containers exposed to fire with water spray.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

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Other information : Disposal must be done according to official regulations.

### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.  
Maximum storage period : ≈ 2 year(s)  
Storage temperature : < 50 °F  
Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.  
Special rules on packaging : Store in a closed container.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available.

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Chemically resistant protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

#### Eye protection:

Use splash goggles when eye contact due to splashing is possible.

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Accidental release measures. Filter type: P1.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Colour : Gold coloured Brownish  
Odour : characteristic  
Odour threshold : No data available  
pH : 2 - 3  
Melting point : Not applicable  
Freezing point : No data available  
Boiling point : No data available  
Flash point : ≈ 402 °F  
Relative evaporation rate (butylacetate=1) : No data available  
Flammability (solid, gas) : Not applicable  
Vapour pressure : No data available

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Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.9 - 1 g/ml (68°F)
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 50 - 100 mPa.s (104°F)
Explosive limits	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available

### 9.2. Other information

Other properties : No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions. To avoid thermal decomposition, do not overheat.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

<b>Isomerized Kettle Extract (IKE)</b>	
ATE US (oral)	333 mg/kg bodyweight
<b>3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one (468-28-0)</b>	
LD50 oral rat	100 mg/kg bodyweight

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 2 - 3
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 2 - 3
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)

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Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Based on available data, the classification criteria are not met.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other adverse effects : No additional information available.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Disposal must be done according to official regulations. Do not dispose of with domestic waste. Do not discharge into drains or the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not applicable

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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### Isomerized Kettle Extract (IKE)

Manufacturing of food

#### 15.2. International regulations

No additional information available.

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Revision date : 01/22/2018  
Data sources : Information provided by the manufacturer.  
Department issuing data specification sheet: : KFT Chemieservice GmbH  
Im Leuschnerpark, 3 64347 Griesheim  
Postfach 1451 64345 Griesheim  
Germany  
Phone: +49 6155-8981-400 Fax: +49 6155 8981-500  
Safety Data Sheet Service: +49 6155 8981-522  
Contact person : Stefanie Zgorzelski

Full text of H-statements:

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

Abbreviations and acronyms:

ATE	Acute Toxicity Estimate
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LD50	Median lethal dose
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Indication of changes:

Section	Changed item	Change	Comments
2.1	GHS-US classification	Modified	
2.2	Precautionary statements	Modified	
3	Composition	Modified	

KFT SDS US 00

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*