

Safety data sheet according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- Trade name: **Leaf hops**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- **Application of the substance / the preparation:** Manufacturing of food
- **Uses advised against** -
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier/Manufacturer:**
Simon H. Steiner
Hopfen GmbH
Auhofstr. 18
84048 Mainburg
Germany
- Tel.: +49-8751-8605-0
Fax: +49-8751-8605-80
- **Email competent person:** sds@kft.de
- **Information department:** See supplier/manufacturer
- **1.4 Emergency telephone number:**
Simon H. Steiner, Hopfen, GmbH, Mainburg, Germany
Tel.: +49-8751-8605-0 (Monday – Friday 08:00 – 17:00)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Acute Tox. 4 H302 Harmful if swallowed.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard-determining components of labelling:**
3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one
- **Hazard statements**
H302 Harmful if swallowed.
- **Precautionary statements**
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 1)

· vPvB: Not applicable

* SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Manufacturing of food

· **Dangerous components:**

CAS: 468-28-0 3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one 1-15%

EINECS: 207-405-3 Acute Tox. 3, H301

CAS: 8007-04-3 hop oil 1-5%

Flam. Liq. 3, H226; Asp. Tox. 1, H304

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

* SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** If symptoms persist or in case of doubt, seek medical advice.

· **After inhalation:**

Inhalation of product unlikely. If forming dust is inhaled when handling the product, supply fresh air.

Supply fresh air and be sure to call a doctor.

In case of unconsciousness, place patients on their side in a stable position for transportation.

· **After skin contact:** Wash with water and soap.

· **After eye contact:**

Eye contact is unlikely. If particles get into the eyes, remove as customary for foreign bodies.

If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse mouth with water.

Spit liquid out again.

Seek immediate medical advice.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.· **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No data available

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO₂)

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information:**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

— GB —
(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 2)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.
Ensure adequate ventilation.
Use respiratory protective device against the effects of fumes/dust/aerosol.

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.

- **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.
Avoid any dust formation. Pick up with a tested and approved industrial vacuum cleaner if necessary.
Make sure to recycle or dispose of in suitable receptacles.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Use only in well ventilated areas.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be regularly removed.
Avoid ingestion and inhalation.

- **Information about protection against explosions and fires:**

Dust may combine with air to form an explosive mixture.



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.
Observe the general rules of industrial fire protection.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store cool and dry.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
Protect from contamination.

- **Maximum storage temperature:** < 5 °C

- **Storage class:** 11 Combustible solids

- **7.3 Specific end use(s)** No further relevant information available

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **CAS No. Designation of material % Type Value Unit**

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

Observe general threshold limit for dust.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 3)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures should be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
To avoid bacterial contamination it is recommended to use gloves and mask.
- **Breathing equipment:**
In case of unintentional release of substance, exceeding the occupational exposure limit value:
Dust protection mask
Filter P1
FFP1
- **Protection of hands:** Not required
- **Material of gloves:** -
- **Penetration time of glove material:** -
- **Eye protection:** Not required
- **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information:

· Appearance:

Form:	Solid
Colour:	Green
Odour:	Characteristic
Odour threshold:	Not determined

· pH-value: Not determined

· Change in condition:

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not applicable

· Flash point: Not applicable

· Flammability (solid, gaseous): Not determined

· Ignition temperature: Not determined

· Decomposition temperature: Not determined

· Self ignition temperature: Product is not self-igniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/dust mixtures is possible.

· Explosion limits:

Lower:	Not determined
Upper:	Not determined

· Oxidizing properties: Not determined

· Vapour pressure: Not determined

· Density: Not determined

· Vapour density: Not applicable

· Evaporation rate: Not applicable

· Solubility in / Miscibility with

Water: Slightly soluble

· Partition coefficient (n-octanol/water): Not determined

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 4)

· Viscosity:	
dynamic:	Not applicable
kinematic:	Not applicable
Surface tension:	Not applicable
· 9.2 Other information	No further relevant information available

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**
The way the product is supplied there is no risk of dust explosion; however, the risk of dust explosion cannot be excluded completely if the atmosphere is enriched with fine dust. Therefore avoid formation of dust!
- **10.4 Conditions to avoid** No further relevant information available
- **10.5 Incompatible materials:** No further relevant information available
- **10.6 Hazardous decomposition products:**
No hazardous decomposition products if instructions for storage and handling are followed

* SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.
- **LD/LC50 values that are relevant for classification:**
ATE oral: 833 mg/kg
468-28-0 3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one
Oral LD₅₀ 100 mg/kg (rat)
Lungs, thorax, or respiration: cyanosis, behavioral: ataxia. Arzneimittel-Forschung. Drug Research. Vol. 17, Pg. 79, 1967.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Not determined
- **Serious eye damage/irritation** Eye irritation is possible after mechanical influence (dust).
- **On respiratory tract:** No data available
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Not relevant

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **12.2 Persistence and degradability** No further relevant information available
- **12.3 Bioaccumulative potential** No further relevant information available
- **12.4 Mobility in soil** No further relevant information available

(Contd. on page 6)

— GB —

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 5)

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous to water

According to appendix 4 of VwVwS dated 17.05.1999 (German regulation)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Danger to drinking water is possible if large quantities leak into the ground or into water course.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable

- **vPvB:** Not applicable

- **12.6 Other adverse effects** No further relevant information available

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation:**

Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste Catalogue based on the identification of the waste generating source.

Disposal according to instructions of local authorities

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, ADN, IMDG, IATA**

Void

- **14.2 UN proper shipping name**

- **ADR, ADN, IMDG, IATA**

Void

- **14.3 Transport hazard class(es)**

- **ADR, ADN**

- **Class**

Void

- **IMDG, IATA**

- **Class**

Void

No hazardous good according to the regulation

- **14.4 Packing group**

- **ADR, IMDG, IATA**

Void

- **14.5 Environmental hazards:**

- **Marine pollutant:**

No

- **14.6 Special precautions for user**

Not applicable

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

- **UN "Model Regulation":**

Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 19.10.2016

Version: 2.00

Revision: 19.10.2016

Trade name: Leaf hops

(Contd. of page 6)

- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for amendments:**
 - Classification
 - Applications
 - Data on components
 - Information on toxicity
 - General revision
- **Replaces version dated:** 12.10.2016
- **Relevant phrases**
 - H226 Flammable liquid and vapour.
 - H301 Toxic if swallowed.
 - H304 May be fatal if swallowed and enters airways.
- **Classification according to Regulation (EC) No 1272/2008** Acute Tox. 4 (H302): calculation method
- **Department issuing SDS:**
 - 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:** Dr. Daniel Ries
- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Flam. Liq. 3: Flammable liquids – Category 3
 - Acute Tox. 3: Acute toxicity – Category 3
 - Acute Tox. 4: Acute toxicity – Category 4
 - Asp. Tox. 1: Aspiration hazard – Category 1
- **Sources:**
 - Information provided by the manufacturer
 - ECHA - European Chemicals Agency
- *** Data compared to the previous version altered.**
 - Changes have been made to sections marked with a *, as compared to the previous version.