

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

1.1. Product identifier

Product form : Substance (UVCB)
Trade name : Tannin Extract
Chemical name : Hop, Humulus lupulus, ext.
EC-No. : 232-504-3
CAS-No. : 8060-28-4

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Leather treatment products
Manufacturing of food

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier

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

Supplier/Importer

Steiner Hops Ltd.
15A Henley Business park
Pirbright Road
GU3 2DX Normandy Guildford, Surrey
United Kingdom
T +44 1992 572 331

Email competent person

sds@kft.de

Manufacturer/Supplier

Hallertauer Hopfenveredelungsges. mbH
Auhofstr. 18
84048 Mainburg
Germany
T +49 8751 8605 500

Supplier/Importer

S. S. Steiner, Inc.
1 West Washington Avenue
WA 98903 Yakima
USA
T +1 509 453 4731

1.4. Emergency telephone number

Emergency number : Simon H. Steiner, Hopfen, GmbH
Tel.: +49 8751 8605 0 (Montag – Freitag 08:00 – 17:00, Central European Time)

Hallertauer Hopfenveredelungsges. mbH
Tel.: +49 8751 8605 500 (Montag – Freitag 08:00 – 17:00, Central European Time)

Steiner Hops Ltd.
Phone: +44 1992 572 331 (Monday to Friday 8.00-17.00, Greenwich Mean Time)

S. S. Steiner, Inc.
Phone: +1 509 453 4731 (Monday to Friday 8.00-17.00, Pacific Time Zone)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Full text of H- and EUH-statements: see section 16

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Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary statements (CLP) :

P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective clothing, protective gloves, eye protection.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|---|---|
| 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) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : UVCB
Chemical name : Hop, Humulus lupulus, ext.
CAS-No. : 8060-28-4
EC-No. : 232-504-3

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|----------|--|
| 2-(3,4-dihydroxyphenyl)-2,3,4-trihydro-3,5,7-trihydroxymene (Constituent) | CAS-No.: 490-46-0 | ≤ 6 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |
| 3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one (Constituent) | CAS-No.: 468-28-0 EC-No.: 207-405-3 REACH-no: 01-2120766877-32-0001 | < 0.1 | Acute Tox. 4 (Oral), H302 (ATE=700 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

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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. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Call a poison center or a doctor if you feel unwell. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|-------------------|
| Symptoms/effects after skin contact | : Irritation. |
| Symptoms/effects after eye contact | : Eye irritation. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Strong water jet. |

5.2. Special hazards arising from the substance or mixture

| | |
|--|---|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Carbon monoxide. Carbon dioxide. |
|--|---|

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| 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. Avoid contact with skin and eyes. |
|----------------------|--|

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

No additional information available

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. |
| 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.

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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. Avoid contact with skin and eyes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Product must only be kept in the original packaging. Store in a well-ventilated place. Keep cool.
- Storage temperature : 0 – 10 °C
- Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| 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) | |
|--|------------------------|
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 6 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 21 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, inhalation | 10 mg/m ³ |
| Long-term - systemic effects, dermal | 3 mg/kg bodyweight/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 1.87 µg/L |
| PNEC aqua (marine water) | 0.187 µg/L |
| PNEC aqua (intermittent, freshwater) | 1.87 µg/L |
| PNEC aqua (intermittent, marine water) | 0.187 µg/L |
| PNEC (STP) | |
| PNEC sewage treatment plant | 10 mg/l |

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Wear closed safety glasses. EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. EN ISO 13688. EN 13034

Hand protection:

Chemically resistant protective gloves. Nitrile rubber. EN 374. 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

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Breathing apparatus with filter. Filter type: A. EN 143. . Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|-----------------------------|
| Physical state | : Liquid |
| Colour | : dark brown. |
| Odour | : Not available |
| Odour threshold | : Not available |
| Melting point | : Not applicable |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not available |
| Explosive properties | : Product is not explosive. |
| Oxidising properties | : Non oxidizing. |
| Explosive limits | : Not available |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : 4.9 – 5.9 |
| Viscosity, kinematic | : Not available |
| Viscosity, dynamic | : 5 – 10 mPa.s (104 °F) |
| Solubility | : Not available |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |

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| | |
|---------------------------------|--------------------|
| Vapour pressure at 50°C | : Not available |
| Density | : 1.2 g/ml (68 °F) |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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.

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 hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------------------------|---|
| Acute toxicity (oral) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (dermal) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (inhalation) | : Not classified (Based on available data, the classification criteria are not met) |

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)

| | |
|---------------|----------------------|
| LD50 oral rat | 700 mg/kg bodyweight |
|---------------|----------------------|

| | |
|-----------------------------------|---|
| Skin corrosion/irritation | : Causes skin irritation. pH: 4.9 – 5.9 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 4.9 – 5.9 |
| 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) |
| STOT-single exposure | : Not classified (Based on available data, the classification criteria are not met) |

2-(3,4-dihydroxyphenyl)-2,3,4-trihydro-3,5,7-trihydroxymethylene (490-46-0)

| | |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

| | |
|------------------------|---|
| STOT-repeated exposure | : Not classified (Based on available data, the classification criteria are not met) |
|------------------------|---|

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Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

12.2. Persistence and degradability

| 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) | |
|--|---------------------------------|
| Persistence and degradability | Not readily biodegradable. |
| Biodegradation | 26 % (28 d; (OECD 301D method)) |

12.3. Bioaccumulative potential

| 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) | |
|--|--|
| Partition coefficient n-octanol/water (Log Pow) | 4 – 5.5 (40 °C; pH 7; (OECD 117 method)) |

12.4. Mobility in soil

| 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) | |
|--|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.7 – 2.9 (Quantitative structure-activity relationship (QSAR)) |

12.5. Results of PBT and vPvB assessment

| Hop, Humulus lupulus, ext. (8060-28-4) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

HP Code : HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|---------------|---------------|---------------|---------------|
| 14.1. UN number or ID number | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | |
|--|---|
| Reference code | Applicable on |
| 3(b) | Hop, Humulus lupulus, ext. ; 3,5-dihydroxy-2,6,6-tris(3-methylbuten-2-yl)-4-(3-methyl-1-oxobutyl)cyclohexa-2,4-dien-1-one |

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

- Employment restrictions : Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.
- National Rules and Recommendations : TRGS 400: Risk Assessment for Activities involving Hazardous Substances.
TRGS 401: Risks resulting from skin contact - identification, assessment, measures.
TRGS 510: Storage of hazardous substances in non-stationary containers.
TRGS 520: Construction and operation of collection points and temporary storage for small amounts of hazardous waste.
- Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 6390).
- Storage class (LGK, TRGS 510) : LGK 12 - Non-combustible liquids.
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| D MEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |

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| | |
|---------|---|
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TLM | Median Tolerance Limit |
| vPvB | Very Persistent and Very Bioaccumulative |
| CAS-No. | Chemical Abstract Service number |

Data sources : Information provided by the manufacturer. European Chemicals Agency, <http://echa.europa.eu/>.

Department issuing data specification sheet: : KFT Chemieservice GmbH
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Phone: +49 6155-8981-400
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SDS Service: +49 6155 8981-522

Contact person : Dr. Stefanie Finsterbusch-Kettner

Other information : This safety data sheet is for informational purposes only and does not fully comply with national legal requirements. The national distributor is responsible for a legally compliant safety data sheet.

| Full text of H- and EUH-statements: | |
|--|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |

KFT SDS EU 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.