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

Product identifier
Product Name: Dihydrocoumarin
Product Code: SC-227867

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Oral: Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Specific target organ toxicity (single exposure): Category 3

Label elements
Signal word: Warning
Hazard statements:
- HARMFUL IF SWALLOWED
- Causes skin irritation
- Causes serious eye irritation
- May cause respiratory irritation

Symbols/Pictograms

Precautionary Statements - Prevention
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area

Emergency telephone number
Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)
Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
IF IN EYES: 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
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC) Not applicable

Other Information

NFPA Health hazards 2
Flammability 1
Stability 0
Physical and chemical properties -

HMIS Health hazards 2
Flammability 1
Physical hazards 0
Personal protection -

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
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</thead>
<tbody>
<tr>
<td>Dihydrocoumarin</td>
<td>119-84-6</td>
<td>&gt;98</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures

Consult a physician if necessary. Remove to fresh air.

General advice

Wash with plenty of water.

Eye contact

Wash skin with soap and water.

Skin Contact

Remove to fresh air if breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Inhalation

Never give anything by mouth to an unconscious person. Clean mouth with water.

Ingestion

Most important symptoms and effects, both acute and delayed

No information available.

Symptoms

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Note to physicians
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
None.

Specific hazards arising from the chemical
Specific hazards arising from the chemical
No information available.

Hazardous combustion products
Carbon oxides.

Explosion data
Sensitivity to Mechanical Impact
No information available.

Sensitivity to Static Discharge
No information available.

Protective equipment and precautions for firefighters
Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions
Ensure adequate ventilation, especially in confined areas.

Environmental precautions
Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.

Incompatible materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls
Engineering Controls

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>liquid</td>
</tr>
<tr>
<td>Appearance</td>
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</tr>
<tr>
<td>Odor</td>
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</tr>
<tr>
<td>pH</td>
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<tr>
<td>Melting point/freezing point</td>
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<tr>
<td>Boiling point</td>
<td>272 °C</td>
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<tr>
<td>Flash point</td>
<td>113 °C CC (closed cup)</td>
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<tr>
<td>Density</td>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Upper flammability limits</td>
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<tr>
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<tr>
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<td>Solubility in other solvents</td>
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<td>Decomposition temperature</td>
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<tr>
<td>Kinematic viscosity</td>
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<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not applicable

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization
No information available.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
No data available.

Eye contact
No data available.
Skin Contact  
Ingestion  

**Information on toxicological effects**  
*Symptoms*  
*Delayed and immediate effects as well as chronic effects from short and long-term exposure*  
*Chronic Toxicity*  

**Numerical measures of toxicity**  
*Unknown acute toxicity*  
*The following values are calculated based on chapter 3.1 of the GHS document*  
*ATEmix (oral)*  

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**12. ECOLOGICAL INFORMATION**

*Ecotoxicity*  
May cause long lasting harmful effects to aquatic life  
100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.  

*Persistence and degradability*  
*Bioaccumulation*  
*Mobility*  

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**13. DISPOSAL CONSIDERATIONS**

*Disposal of wastes*  
Disposal should be in accordance with applicable regional, national and local laws and regulations.  
*Contaminated packaging*  
Do not reuse container.  

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**14. TRANSPORT INFORMATION**

*DOT*  
Not regulated  
*IMDG*  
Not regulated  
*IATA*  
Not regulated  

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**15. REGULATORY INFORMATION**

*International Inventories*  
All of the components in the product are on the following Inventory lists  
TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC)  
ENCS (Japan): Philippines (PICCS)  

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
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<th>AICS</th>
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<tbody>
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<td>Dihydrocoumarin</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
</tbody>
</table>

* - Listed
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
iECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

16. OTHER INFORMATION

Revision note No information available

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet