Acetyl hexamethyl indan (AHMI)

**CAS-No.:** 15323-35-0

The scope of this Standard includes, but is not limited to the CAS number(s) indicated above; any other CAS number(s) used to identify this fragrance ingredient should be considered in scope as well.

**Synonyms:**
- 5-Acetyl-1,1,2,3,3,6-hexamethyl indan
- 6-Acetyl-1,1,2,3,3,5-hexamethylindane
- 1-(2,3-Dihydro-1,1,2,3,3,6-hexamethyl-1h-inden-5-yl)ethanone
- Ethanone, 1-(2,3-dihydro-1,1,2,3,3,6-hexamethyl-1H-inden-5-yl)- 1,1,2,3,3,6-Hexamethylindan-5-yl methylketone
- Phantolid (commercial name)

**History:**
- **Publication date:** 2020 (Amendment 49)

**Implementation dates:**
- For new creation*: February 10, 2021
- For existing creation*: February 10, 2022

*These dates apply to the supply of fragrance mixtures (formulas) only, not to the finished consumer products in the marketplace.

**RECOMMENDATION:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Maximum Acceptable Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 2</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 3</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 4</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 5A</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 5B</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 5C</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 5D</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Category 6</td>
<td>2.0 %</td>
</tr>
</tbody>
</table>

*No Restriction*
Acetyl hexamethyl indan (AHMI)

**Fragrance ingredient restriction - Note box**
The Standard is set due to the phototoxic effects of Acetyl hexamethyl indan (AHMI). For more detailed information on the application of this Standard, please refer to the note on phototoxic ingredients in chapter 1 of the Guidance for the use of IFRA Standards.

**FLAVOR REQUIREMENTS:**
Due to the possible ingestion of small amounts of fragrance ingredients from their use in products in Categories 1 and 6, materials must not only comply with IFRA Standards but must also be recognized as safe as a flavoring ingredient as defined by the IOFI Code of Practice (www.iofi.org). For more details see chapter 1 of the Guidance for the use of IFRA Standards.

**CONTRIBUTIONS FROM OTHER SOURCES:**
NONE TO CONSIDER BEYOND TRACES (SEE ALSO THE SECTION ON CONTRIBUTIONS FROM OTHER SOURCES IN CHAPTER 1 OF THE GUIDANCE FOR THE USE OF IFRA STANDARDS)

**INTRINSIC PROPERTY DRIVING RISK**
PHOTOTOXICITY

**RIFM SUMMARIES:**

Human studies – phototoxicity
The IFRA Standard is based upon two photoirritation studies in humans. In the first study, 10 volunteers were treated with 10% solution of Acetyl hexamethyl indan (AHMI) in 75% ethanol plus 25% diethyl phthalate on each forearm. Twenty-four hours later, one arm was irradiated (UVA) and the other served as a control. Observations immediately after radiation, at 24 hrs, and at 48 hours showed no phototoxic effects (RIFM, 1986). In the second study, 10 volunteers were treated with a 10% solution in 75% ethanol plus 25% diethyl phthalate on the back. After 30 minutes, the site was irradiated (UVA and UVB). Observations at 5 minutes after irradiation, and at 3, 24, 48, and 72 hours showed no phototoxic effects (RIFM, 1987).

Animal studies – phototoxicity
- 5, 20, 50% in guinea pigs, photoirritation observed 20 and 50% (RIFM, 1978a).
- 5, 20% in rabbits, photoirritation observed at 5 and 20% (RIFM, 1978a).
- 1, 5, 10, 20% in guinea pigs and rabbits, photoirritation observed in guinea pigs and rabbits at 5, 10, and 20% (Ogoshi et al., 1980; Ohkoshi et al., 1981).
- 10% in guinea pigs, no photoirritation observed (Guillot et al., 1985).
- 1% in rabbits, photoirritation observed (RIFM, 1978).
- 1, 2, 4% in rabbits, photoirritation observed (RIFM, 1985a; 1985b).
- 0.01, 1, 10, 25, 50% in hairless mice, photoirritation observed at 10, 25, 50% (RIFM, 1978c).

Animal studies – photoallergy
2% in guinea pigs, no photoallergy observed, 1/10 showed sensitization (RIFM, 1985c).

**EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:**
Amendment 49

Acetyl hexamethyl indan (AHMI)

The Expert Panel for Fragrance Safety reviewed all the available data for Acetyl hexamethyl indan (AHMI) and recommends the concentrations for the 12 different product categories, which are the maximum acceptable concentrations of Acetyl hexamethyl indan (AHMI) in the various product categories.

REFERENCES:

The IFRA Standard on Acetyl hexamethyl indan (AHMI) is based on at least one of the following publications:

• The RIFM Safety Assessment on Acetyl hexamethyl indan (AHMI) is available at the RIFM Safety Assessment Sheet Database: http://fragrancematerialsafetyresource.elsevier.com/.


• Research Institute for Fragrance Materials, Inc. (1985b). Photosensitization test with 1% 5-acetyl-
Acetyl hexamethyl indan (AHMI)

1,1,2,3,3,6-hexamethylindan in albino rabbits. Unpublished report from PFW Aroma Chemicals. Report number 29706, 1 November.


Additional information on the application of IFRA Standards is available in the Guidance for the use of IFRA Standards, publicly available at www.ifrafragrance.org.