

**5-Acetyl-1,1,2,3,3,6-hexamethyl indan (AHMI)**

<b>CAS-No.</b>	15323-35-0	<b>Empirical formula</b>	C17H24O
<b>Structure</b>			
<b>Synonyms</b>	Acetyl 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)		

<b>History:</b>	Initial reviews :	October 1978, October 1987, September 2001	
	Current revision date:	2015	
	Implementation dates:	For new submissions*:	Not applicable
		For existing fragrance compounds*:	Not applicable
Next review date:	2020		

\* This date applies to the supply of fragrance compounds (formulas) only, not to the finished products in the marketplace

<b>Recommendation</b>	<b>Restrictions</b>
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**RESTRICTIONS:**

<b>Limits in the finished product:</b>			
<u>Skin contact products:</u>			
Leave on products:	2%	Rinse-off products:	No Restriction
		<i>Including household cleaning products</i>	
<u>Non skin contact products:</u>	No Restriction		
<b>Note box:</b>			
The limit only applies to applications on skin exposed to sunshine, excluding rinse-off products (please refer to Table 4 of the QRA booklet for more detailed information).			
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QRA booklet for more detailed information).	
<b>Fragrance material specifications:</b>	N/A

**Contribution from other sources:**

None to consider (see also the note on contributions from other sources in the Introduction to the IFRA Standards).

<b>CRITICAL EFFECT:</b>	<b>Phototoxicity</b>
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**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 5-Acetyl-1,1,2,3,3,6-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).

**REXPAN rationale/conclusion:**

The RIFM Expert Panel reviewed the critical effect data for 5-Acetyl-1,1,2,3,3,6-hexamethyl indan (AHMI) and recommended no change to the Standard (September 2001).

**References**

**5-Acetyl-1,1,2,3,3,6-hexamethyl indan (AHMI)**

Guillot, J.P., Gonnet, J.F., Loquerie, J.F., Martini, M.C., Convert, P., and Cotte, J. (1985). A new method for the assessment of phototoxic and photoallergic potentials by topical applications in the albino guinea pig. *J. Toxicol.-Cut. Ocu. Toxicol.*, 4(2), 117-133.

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