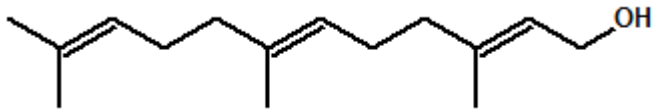
Farnesol

CAS N°:	4602-84-0	**Empirical formula:**	$C_{15}H_{26}O$
		Structure:	
Synonyms:	2,6,10-Dodecatrien-1-ol, 3,7,11-trimethyl- Farnesyl alcohol Trimethyl dodecatrienol 3,7,11-Trimethyl-2,6,10-dodecatrien-1-ol		

History:	Initial reviews:	October 1979, February 1980, 2002	
	Current revision date:	2006	
	Implementation date:	For new submissions*:	June 11, 2007
		For existing fragrance compounds*:	June 11, 2008
	Next review date	2011	

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

RECOMMENDATION:	**RESTRICTED / SPECIFICATION**

RESTRICTIONS:

Limits in the finished product:			
Category 1	0.08 %	Category 7	0.2 %
Category 2	0.11 %	Category 8	2.0 %
Category 3	0.4 %	Category 9	5.0 %
Category 4	1.2 %	Category 10	2.5 %
Category 5	0.6 %	Category 11	See Note Box
Category 6	2.0 %		

Note box:

Category 11 includes all non-skin contact or incidental skin contact products. Due to the negligible skin contact from these types of products there is no justification for a restriction of the concentration of this fragrance ingredient in the finished product.

This Standard replaces the existing one on Farnesol, which only contained the purity criterion as outlined below.

Fragrance material specifications:	Farnesol should only be used as a fragrance ingredient if it contains a minimum of 96% of farnesol isomers as determined by GLC.

CONTRIBUTION FROM OTHER SOURCES:

See **Annex I**

CRITICAL EFFECT:	**SENSITIZATION**

Farnesol

RIFM SUMMARIES:

Farnesol - Sensitization Potency Estimation Based on Weight of Evidence

LLNA weighted mean EC3 values (µg/cm²) [no. studies]	Potency Classification Based on Animal Data[2]	Human Data			WoE NESIL[3] (µg/cm²)
		NOEL – HRIPT (induction) (µg/cm²)	NOEL – HMT (induction) (µg/cm²)	LOEL[1] (induction) (µg/cm²)	
1200 [2]	Weak	2755	NA	68974	2700

NOEL = No observed effect level; HRIPT = Human Repeat Insult Patch Test; MAX = Human Maximization Test;
LOEL = lowest observed effect level; NA = Not Available
[1] Data derived from HRIPT or Human Max tests
[2] Gerberick *et al*., 2001
[3] WoE NESIL limited to two significant figures
LOEL from human maximization test, not a human repeated insult patch test.

REXPAN RATIONALE / CONCLUSION:

The RIFM Expert Panel reviewed the critical effect data for Farnesol and based on the weight of evidence established the No Expected Sensitization Induction Level (NESIL) as 2700 µg/cm². They recommend the limits for the 11 different product categories, which are the acceptable use levels of Farnesol in the various product categories. These were derived from the application of the exposure-based quantitative risk assessment approach for fragrance ingredients, which is detailed in the QRA Expert Group, Technical Dossier of March 15, 2006.

REFERENCES:

Gerberick, GF. et. al. (2001) Contact allergenic potency: Correlation of human and local lymph node assay data. American Journal of Contact Dermatitis, 12(3), 156-161.

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