Methyl heptine carbonate

CAS-No.:	111-12-6 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:	Methyl heptyne carbonate Methyl 2-octynoate Methyl oct-2-ynoate MHC 2-Octynoic acid, methyl ester Folione (commercial name)

History:	Publication date:	2020 (Amendment 49)	Previous Publications:	1976 2000 2005

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:	**RESTRICTION**

MAXIMUM ACCEPTABLE CONCENTRATIONS IN THE FINISHED PRODUCT (%):			
Category 1	0.0085 %	Category 7A	0.096 %
Category 2	0.0025 %	Category 7B	0.096 %
Category 3	0.051 %	Category 8	0.0050 %
Category 4	0.047 %	Category 9	0.092 %
Category 5A	0.012 %	Category 10A	0.33 %
Category 5B	0.012 %	Category 10B	0.33 %
Category 5C	0.012 %	Category 11A	0.18 %
Category 5D	0.012 %	Category 11B	0.18 %
Category 6	0.028 %	Category 12	No Restriction

Methyl heptine carbonate

Fragrance ingredient restriction - Note box
When used in the same fragrance compound within a specific QRA category, the sum total of Methyl heptine carbonate (MHC, CAS number 111-12-6) and Methyl octine carbonate (MOC, CAS number 111-80-8) contributions must not exceed the maximum permitted level for MHC. At the same time, the contribution from MOC should always respect the maximum levels permitted in the respective categories as listed in the Standard for MOC.

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 MANAGEMENT:	**DERMAL SENSITIZATION**

RIFM SUMMARIES:

Maximum acceptable concentrations are based on a comprehensive safety assessment, considering various endpoints. Depending on the outcome of the safety assessment, it might be one or more endpoint(s) that will drive the derivation of the concentration levels. If more than one endpoint is of relevance, the maximum acceptable concentrations for each product category are derived from comparing maximum permitted level per endpoint consideration (e.g. dermal sensitization and/or systemic toxicity). Such maximum acceptable concentrations correspond to the lowest level obtained per category.

Additional information is available in the RIFM safety assessment for Methyl heptine carbonate, which can be downloaded from the RIFM Fragrance Material Safety Assessment Center: http://fragrancematerialsafetyresource.elsevier.com/.

EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:

The Expert Panel for Fragrance Safety reviewed all the available data for Methyl heptine carbonate and recommends the concentrations for the 12 different product categories, which are the maximum acceptable concentrations of Methyl heptine carbonate in the various product categories.

REFERENCES:

The IFRA Standard on Methyl heptine carbonate is based on at least one of the following publications:

• The RIFM Safety Assessment on Methyl heptine carbonate if available at the RIFM Fragrance Material Safety Assessment Center: http://fragrancematerialsafetyresource.elsevier.com

Methyl heptine carbonate

• Api A.M., Belsito D., Bruze M., Cadby P., Calow P., Dagli M. L., Dekant W., Dent M., Ellis G., Fryer A. D., Fukayama M., Griem P., Hickey C., Kromidas L., Lalko J., Liebler D.C., Miyachi Y., Politano V.T., Renskers K., Ritacco G., Salvito D., Schultz T.W., Sipes I. G., Smith B., Vitale D., Wilcox D.K. (2015). Criteria for the Research Institute for Fragrance Materials, Inc. (RIFM) safety evaluation process for fragrance ingredients. Food Chem Toxicol. 2015 Aug;82 Suppl:S1-S19 (http://fragrancematerialsafetyresource.elsevier.com/sites/default/files/Criteria_Document_Final.pdf).

• Salvito D.T., Senna R. J., Federle T.W. (2002). A framework for prioritizing fragrance materials for aquatic risk assessment. Environ Toxicol Chem. 2002;21:1301-1308 (https://www.ncbi.nlm.nih.gov/pubmed/12069318).

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.