# METHYL HEPTINE CARBONATE

**CAS N°:** 111-12-6

**Empirical formula:** $C_9H_{14}O_2$

**Synonyms:** **Folione**
**Methyl heptyne carbonate**
**Methyl 2-octynoate**
**MHC**
**2-Octynoic acid, methyl ester**

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**History:** Initial reviews: October 1976, April 2000

Current revision date: January 2001

**Implementation date**: for new submissions*: Not applicable

for existing fragrance compounds*: Not applicable

**Next review date**: 2006

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

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**STANDARD:** **RESTRICTED**

**RESTRICTIONS:**

**Limits in the finished product:**

Skin-contact products:

Leave-on products: 0.01%

Rinse-off products: 0.01%
*including household cleaning products*

Non skin-contact products: 0.1%

**Note box**: When used together, methyl heptine carbonate and methyl octine carbonate should not be used such that the combined level in skin contact consumer products exceeds 0.01%, of which methyl octine carbonate should not be more than 0.002%.

For use in consumer products for which no skin contact is foreseeable under normal conditions of use, the combined level should not exceed 0.1%, of which methyl octine carbonate should not be more than 0.02%.

**Fragrance material specification:** Not applicable

**Contribution from other sources:** None known

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**Critical effect:** **Sensitization**

**RIFM summaries:**
A human repeated insult patch test was conducted at 0.25% and produced 2/41 sensitization reactions (RIFM, 1964). No sensitization reactions were observed in 4 human repeated insult patch tests using 0.1% of the test material (0/42, 0/40, 0/33, and 0/71) (RIFM 1965; 1989a; 1990a). In addition, two human repeated insult patch tests conducted at 0.1% of a 1:1 mixture of methyl heptine carbonate and methyl octane carbonate in 75% ethanol/25% diethyl phthalate produced a total of 2/100 sensitization reactions (RIFM 1989b; 1990b). Cross-reactivity was observed when a mixture of both materials were tested.

**Rexpan Rationale / Conclusion:**

The RIFM Expert Panel reviewed the critical effect data for methyl heptine carbonate and recommended no change to the Standard (January 2001).

**References:**

Research Institute for Fragrance Materials, Inc. (1964). Human repeated patch test on methyl-2-nonynoate and isoeugenol. Unpublished report form IFF, Inc. Report number 1808, 30 April.

Research Institute for Fragrance Materials, Inc. (1965). Repeated insult patch test of cinnamyl nitrile, methyl 2-octynoate and ethyl alcohol in human subjects. Unpublished report form IFF, Inc. Report number 1981, 19 May and 1 October.

Research Institute for Fragrance Materials, Inc. (1989a). Human repeated insult patch test of methyl 2-octynoate. RIFM report number 12368, 16 November.

Research Institute for Fragrance Materials, Inc. (1989b). Human repeated insult patch test of methyl 2-octynoate and methyl 2-nonynoate. RIFM report number 12367, 16 November.

Research Institute for Fragrance Materials, Inc. (1990a). Repeated insult patch test of methyl 2-octynoate in human subjects. RIFM report number 12452, 27 April.

Research Institute for Fragrance Materials, Inc. (1990b). Repeat insult patch test of methyl 2-octynoate and methyl 2-nonynoate in human subjects. RIFM report number 12456, 27 April.