

DIN EN ISO 17507-1:2026-10 (E)

Natural gas - Calculation of methane number of gaseous fuels for reciprocating internal combustion engines - Part 1: MN_C method (ISO 17507-1:2025)

Contents

	Page
Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 MN _C method.....	2
5.1 Introduction.....	2
5.2 Applicability.....	2
5.2.1 Standard gaseous fuel composition range	2
5.2.2 Handling of other gaseous fuel components	3
5.3 Methodology to calculate the MN _C	4
5.4 Expression of results.....	4
5.5 Uncertainty error and bias.....	4
6 Example calculations	5
6.1 Example 1.....	5
6.1.1 Simplification of the composition of the gaseous fuel.....	5
6.1.2 Selection of the ternary systems	5
6.1.3 Sub-division of the inert-free mixture into the selected partial mixtures	8
6.1.4 Calculation of the methane number of the partial mixtures	8
6.1.5 Criteria for not using ternary systems for final calculation of the MN _C	9
6.1.6 Adjustment of the composition and fraction of the partial mixtures	9
6.1.7 Calculation of the methane number of the simplified mixture.....	10
6.1.8 Calculation of the methane number of the gaseous fuel.....	10
6.2 Example 2.....	10
6.2.1 Simplification of the composition of the gaseous fuel.....	10
6.2.2 Calculation of fitness of the ternary systems	11
6.2.3 Selection of ternary mixtures.....	11
6.2.4 Calculation of the methane number	11
6.3 Example 3.....	11
6.3.1 Simplification of the composition of the gaseous fuel.....	11
6.3.2 Calculation of fitness of the ternary systems	11
6.3.3 Selection of ternary mixtures.....	12
6.3.4 Calculation of the methane number	12
6.3.5 Additional numerical examples	13
Annex A (normative) Numerical results of calculations for a variety of compositions for software validation purposes.....	14
Annex B (informative) Tools for users of the MN _C Method	27
Annex C (normative) Uncertainty error and bias.....	28
Annex D (informative) Natural gas-based fuels for reciprocating internal combustion engines	30
Annex E (informative) Basis of the MN _C method	31
Bibliography	36