DIN ISO 13472-2:2010-12 (E)

Acoustics - Measurement of sound absorption properties of road surfaces in situ - Part 2: Spot metho d for reflective surfaces (ISO 13472-2:2010)

Contents

Page

National foreword 3

National Annex NA (informative) Bibliography 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 7

4 Principle 7

5 Test equipment 9
5.1 Components of the test system 9
5.2 Sound source 9
5.3 Test signal 9
5.4 Impedance tube 9
5.4.1 Tube diameter 9
5.4.2 Tube length and microphone positions 10
5.5 Microphones 11
5.6 In-situ test fixture between impedance tube and test surface 11
5.7 Signal-processing system 11
5.8 Thermometer and pressure measurement 11

6 Measurement and analysis procedure 11
6.1 Stabilizing the system 11
6.2 Calibration of the system 12
6.3 Reference measurement 12
6.4 Background noise measurement 12
6.5 Measurement of a road surface 12
6.6 Data analysis 13

7 Positioning of the equipment 13
7.1 Location of the measurement positions 13
7.1.1 Test surfaces such as those meeting ISO 10844 requirements 13
7.1.2 Regular roads 13
7.2 Condition of the road surface 13
7.3 Temperature 13

8 Measurement and analysis procedure 13

9 Measurement uncertainty 14

10 Test report 16

Annex A (normative) Correction on base of reference measurement 17

Annex B (informative) Measurement uncertainty 18

B.1 General 18
B.2 Expression for the calculation of the absorption coefficient 18
B.3 Sources of uncertainty 19
B.4 Expanded uncertainty of measurement 20

Annex C (informative) Sketch of in-situ test fixture 21

Annex D (informative) Example of a test report 23

Bibliography 25