

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

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

---

<b>Contents</b>		<b>Page</b>
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>B.1</b>	<b>General</b> .....	<b>18</b>
<b>B.2</b>	<b>Expression for the calculation of the absorption coefficient</b> .....	<b>18</b>
<b>B.3</b>	<b>Sources of uncertainty</b> .....	<b>19</b>
<b>B.4</b>	<b>Expanded uncertainty of measurement</b> .....	<b>20</b>
<b>Annex C (informative) Sketch of in-situ test fixture</b> .....		<b>21</b>
<b>Annex D (informative) Example of a test report</b> .....		<b>23</b>
<b>Bibliography</b> .....		<b>25</b>