

DIN EN 1793-6:2018-08 (E)

Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 6: Intrinsic characteristics - In situ values of airborne sound insulation under direct sound field conditions

Contents		Page
	European foreword	4
	Introduction	6
1	Scope	8
2	Normative references	8
3	Terms and definitions	8
4	Sound insulation index measurements	13
4.1	General principle	13
4.2	Measured quantity	13
4.3	Test arrangement	14
4.4	Measuring equipment	19
4.4.1	Components of the measuring system	19
4.4.2	Sound source	19
4.4.3	Test signal	19
4.5	Data processing	20
4.5.1	Calibration	20
4.5.2	Sample rate	20
4.5.3	Background noise	21
4.5.4	Scanning technique using a single microphone	21
4.5.5	Scanning technique using nine microphones	21
4.5.6	Adrienne temporal window	22
4.5.7	Placement of the Adrienne temporal window	23
4.5.8	Low frequency limit and sample size	24
4.6	Positioning of the measuring equipment	25
4.6.1	Selection of the measurement positions	25
4.6.2	Post measurements	26
4.6.3	Additional measurements	26
4.6.4	Reflecting objects	26
4.6.5	Safety considerations	26
4.7	Sample surface and meteorological conditions	27
4.7.1	Condition of the sample surface	27
4.7.2	Wind	27
4.7.3	Air temperature	27
4.8	Single-number rating	27
4.8.1	General	27
4.8.2	Acoustic elements	27
4.8.3	Posts	28
4.8.4	Global	28
5	Measurement uncertainty	29
6	Measuring procedure	29
7	Test report	29

Annex A (informative) Categorization of single-number rating	31
Annex B (informative) Guidance note on use of the single-number rating	32
Annex C (informative) Measurement uncertainty	33
C.1 General	33
C.2 Measurement uncertainty based upon reproducibility data	33
C.3 Standard deviation of repeatability and reproducibility of the sound insulation index	33
Annex D (informative) Template of test report on airborne sound insulation of road traffic noise reducing devices	36
D.1 General	36
D.2 Test setup (example)	38
D.3 Test object and test situation (example)	39
D.4 Results (example)	42
D.4.1 Part 1 - Results for `element' in tabular form	42
D.4.2 Part 2 - Results for `element' in graphic form	43
D.4.3 Part 3 - Results for `post' in tabular form	44
D.4.4 Part 4 - Results for `post' in graphic form	45
D.4.5 Part 5 - Results for global condition (average of `element' and `post') in tabular form	46
D.4.6 Part 6 - Results for global condition (average of `element' and `post') in graphic form	47
D.5 Uncertainty (example)	47
Bibliography	50