

DIN EN 1793-5:2018-12 (E)

Road traffic noise reducing devices - Test method for determining the acoustic performance - Part 5: Intrinsic characteristics - In situ values of sound reflection under direct sound field conditions (includes Corrigendum :2018)

Contents		Page
European foreword		4
Introduction		6
1	Scope	8
2	Normative references	8
3	Terms and definitions	8
4	Symbols and abbreviations	13
5	Sound reflection index measurements	15
5.1	General principle	15
5.2	Measured quantity	15
5.3	Test arrangement	18
5.4	Measuring equipment	23
5.4.1	Components of the measuring system	23
5.4.2	Sound source	24
5.4.3	Test signal	24
5.5	Data processing	25
5.5.1	Calibration	25
5.5.2	Sample rate	26
5.5.3	Background noise	27
5.5.4	Signal subtraction technique	27
5.5.5	Adrienne temporal window	30
5.5.6	Placement of the Adrienne temporal window	32
5.5.7	Low frequency limit and sample size	33
5.6	Positioning of the measuring equipment	35
5.6.1	Maximum sampled area	35
5.6.2	Selection of the measurement positions	35
5.6.3	Reflecting objects	42
5.6.4	Safety considerations	42
5.7	Sample surface and meteorological conditions	42
5.7.1	Condition of the sample surface	42
5.7.2	Wind	42
5.7.3	Air temperature	42
5.8	Single-number rating of sound reflection DLRI	42
5.9	Measurement uncertainty	43
5.10	Measuring procedure	43
5.11	Test report	44
Annex A (informative) Measurement uncertainty		46
A.1	General	46
A.2	Measurement uncertainty based upon reproducibility data	46
A.3	Standard deviation of repeatability and reproducibility of the sound reflection index	46
Annex B (informative) Template of test report on sound reflection of road noise barriers		48

B.1	Overview	48
B.2	Test setup (example)	50
B.3	Test object and test situation (example)	51
B.4	Test Results (example)	53
B.4.1	Part 1 - Results in tabular form	53
DIN EN 1793-5:2018-12 EN 1793-5:2016 (E) B.4.2 Part 2 - Results in graphic form		54
B.5	Uncertainty (example)	54
Annex C (informative) Near field to far field relationship		56
Bibliography		57