DIN 18515-1:2023-06 (E)

Cladding for external walls - Principles of design and application - Part 1: Tiles fixed with mortar

Contents

Page

Foreword ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 6
4 Materials ... 8
4.1 General ... 8
4.2 Ceramic tiles ... 8
4.3 Split tiles and clinker bricks ... 8
4.4 Natural stone products ... 9
4.5 Cast stone ... 9
4.6 Factory-made mortar ... 9
4.7 Hydraulic thin-bed mortar ... 10
4.8 Reaction resin adhesives ... 10
4.9 Hydraulic grouts ... 10
4.10 Joint sealants ... 10
5 Requirements on external walls and fixing surfaces ... 10
5.1 Requirements on external walls ... 10
5.2 Requirements on fixing surfaces ... 10
5.2.1 General ... 10
5.2.2 Special requirements ... 11
5.3 Checking the fixing surfaces ... 12
6 Mortar selection ... 12
6.1 General ... 12
6.2 Selection of laying mortar as a function of the cladding material ... 12
6.3 Placing tiles ... 12
6.3.1 General ... 12
6.3.2 Building site conditions and influences of weather ... 13
6.3.3 Mixing the cementitious mortar ... 13
6.3.4 Mixing the reaction resin adhesive ... 13
6.3.5 Application of the laying mortar or adhesive on both sides (floating-buttering method), placing or laying of the covering and cladding materials ... 13
6.3.6 Wetting surface ... 13
6.3.7 Placing the cladding materials ... 14
6.4 Joints ... 14
6.4.1 Mortar joints ... 14
6.4.2 Movement joints ... 14
6.5 Built-in components ... 15
7 Production of fixing surfaces for tiles on anchored metal lath ... 15
7.1 General ... 15
7.2 Plaster with structural steel mesh reinforcement ... 15
7.3 Plaster applied on metal lath ... 15
7.4 Thermal insulation ... 16
8 Maintenance ... 16
Annex A (informative) **Determination of the vapour diffusion resistance of the external wall cladding, taking into account the joint ratio** ... 17
Annex B (informative) **Determining the joint ratio as a function of joint width and cladding dimensions** ... 18
Bibliography ... 20

Figures

Figure A.1 — Determining the vapour diffusion resistance of the external wall cladding, taking into account the joint ratio [1]..... 17

Tables

Table B.1 — Joint ratios in percent for a joint width of 10 mm..... 18
Table B.2 — Joint ratios in percent for a joint width of 8 mm..... 18
Table B.3 — Joint ratios in percent for a joint width of 5 mm..... 19
Table B.4 — Joint ratios in percent for a joint width of 3 mm..... 19