

DIN 18008-4:2013-07 (E)

Glass in Building - Design and construction rules - Part 4: Additional requirements for barrier glazing

| Contents | Page |
|---|-------------|
| Foreword | 4 |
| 1 Scope | 5 |
| 2 Normative references | 6 |
| 3 Terms and definitions..... | 7 |
| 4 Construction products | 7 |
| 5 Conditions of application..... | 8 |
| 5.1 Edge protection requirements..... | 8 |
| 5.2 Proof of edge protection..... | 8 |
| 6 Exposure to stress and proof of resistance | 8 |
| 6.1 Ultimate limit state (ULS) for static loads and stress effects | 8 |
| 6.2 Ultimate limit state (ULS) for impact | 9 |
| Annex A (normative) Proof of glazing impact resistance by building-component tests..... | 10 |
| A.1 Pendulum impact test | 10 |
| A.2 Penetration test..... | 14 |
| A.3 Test report | 15 |
| Annex B (normative) Constructions with proven impact resistance | 16 |
| B.1 Linearly supported glazing units of Categories A and C | 16 |
| B.2 Point-fixed glazing units of Categories A and C | 18 |
| B.3 Linearly supported glazing of Category B..... | 19 |
| Annex C (normative) Proof of the impact resistance of glass structures determined by calculation..... | 22 |
| C.1 Bases of calculation..... | 22 |
| C.1.1 General | 22 |
| C.1.2 Design and construction stipulations | 22 |
| C.1.3 Exposure to stress | 22 |
| C.1.4 Resistance..... | 22 |
| C.1.5 Proof of impact resistance of insulating glass units | 23 |
| C.1.6 Proof of impact resistance of laminated safety glass | 23 |
| C.1.7 Overlaying of impact loads with other actions | 23 |
| C.2 Simplified proof procedure..... | 23 |
| C.2.1 Bases of calculation..... | 23 |
| C.2.2 Exposure to stress | 24 |
| C.2.3 Proof | 24 |
| C.3 Proof by means of fully dynamic transient simulation of impact event..... | 25 |
| C.3.1 General | 25 |
| C.3.2 Verification | 26 |
| C.3.3 Proof..... | 30 |
| Annex D (normative) Proof of the impact resistance of supporting structures..... | 31 |
| D.1 Linear support structures | 31 |
| D.2 Point-fixed support structures | 31 |
| Annex E (normative) Proof of edge protection by component test..... | 32 |

E.1 General 32
E.2 Test execution..... 32
E.3 Test report 32
Annex F (normative) Effective edge protection, proven by tests 35
Bibliography 36