

DOOR FUNCTIONS



FIRE PREVENTION

Standard: DIN 4102 or DIN EN 16034 product standard, DIN EN 1634-1 test standard fire prevention doors

E = Room closure

I = Thermal insulation

C = Self-closing in continuous testing

(C₅ corresponds to 200,000 closes)

- EI₂30-C₅ = 30 min (fire retardant)
- EI₂60-C₅ = 60 min (highly fire retardant, use in export)
- EI₂90-C₅ = 90 min (fire resistant)

Requirements for fire-resistant doors:

- Self closing
- Compliance with the fire requirements laid out in the standard
- Reliable functionality and maintenance over a long period
- According to German Certification full door set including frame and hardware must be supplied by the manufacturer (i.e., door leaf, frame, closers, hinges, locks, and handles). Regulations may differ in other countries.



SMOKE PROTECTION

Standard: DIN 18095 or DIN EN 16034 product standard, DIN EN 1634-3 test standard smoke control doors

C = Self-closing in continuous testing

(C₅ corresponds to 200,000 closes)

S = seal

(S₂₀₀ corresponds to smoke tightness at 200°C)

S₂₀₀-C₅ (smoke tight)

Requirements for smoke-resistant doors:

- Self closing (door closer)
- Reliable functionality and maintenance over a long period
- Full fireproof door set including the leaf and hardware must be supplied by the manufacturer (i.e., door leaf, frame, closers, hinges, locks, handles, sealants including frame hinge seals and retractable floor seals, and threshold joint sealing)



BURGLARY PREVENTION

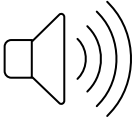
Standard: DIN EN 1627-1630

	Classes of resistance in acc. with DIN EN 1627	Classes of resistance in acc. with DIN V ENV 1627	Time of resistance in minutes
Correlation table with resistance classification in agreement with DIN EN 1627: 2011-09	RC1 N	- ¹	no manual testing
	RC2 N	WK 2 ²	3
	RC2	WK 2	3
	RC3	WK 3	5
	RC4	WK 4	10
	RC5	WK 5	15
	RC6	WK 6 ³	20

¹ No classification, as testing requirements have been increased.

² The resistance class WK 2 is generally suitable for the correlation of the resistance class RC 2 N, but the glazing can be agreed freely.

³ Supplementary test with a splitting hammer according to DIN EN 1630:2011-08.



SOUNDPROOFING

Standard: DIN 4109

		Classes	DIN 4109	Requirements required reference value (Rw,R)	Detection reference value (Rw,P)
Basic soundproofing classes as per DIN 4109	SK27 ¹	1	27	≥ 27 dB	≥ 32 dB
	SK32 ²	2	32	≥ 32 dB	≥ 37 dB
	SK37 ³	3	37	≥ 37 dB	≥ 42 dB
increased soundproofing as per DIN 4109-5 ⁴	SK40	3,5	40	≥ 40 dB	≥ 45 dB
	SK42	4	42	≥ 42 dB	≥ 47 dB

Requirements acc. to DIN 4109

¹ Entrance doors to apartments (with internal corridor, standard property insert classroom doors)

² Hotel and hostel rooms, and hospital rooms

³ Entrance doors to apartments (without internal corridor, hostels, hospitals)

⁴ To be agreed in the building contract



DAMP ROOM

Standard: RAL-GZ 426 Teil 1-5, DIN EN 16580

Evaluation criteria for damp room door with 48 test cycles:

- 0.5 min Spray phase
- 29.5 min Drying phase
- Water temperature 20°C
- Showering 500 mm from lower edge of door leaf

Requirements:

- The full door set including hardware must be corrosion resistant
- Frame: Damp room frame



WET ROOM

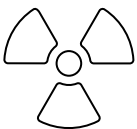
Standard: RAL-GZ 426, DIN EN 16580 (splash water resistant)

Evaluation criteria for wet room door with 96 test cycles:

- 4 min Spray phase
- 26 min Drying phase
- Water temperature 30°C
- Showering 1500 mm from lower edge of door leaf

Requirements:

- Corrosion resistant hardware
- Frame: High-grade steel frame



RADIATION PROTECTION

Standard: as per DIN 6834

Requirements for radiation-resistant doors:

- X-ray protection
- Lead foil all over the opening and closing area
- From weakness equivalent (lipping) 2.0 mm: Radiation protection lock with 2 half cylinders
- Glass opening with lead glazing and lead-backed beads
- Lead-lined door frame