

# Environmental-/Corrosivity categories

Environment class	Corrosivity category	Environmental corrosivity	Environmental aggressiveness	Examples of typical environments	
				Exterior	Interior
M0	C1	Very low	None	-	Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels.
M1 M2	C2 C2	Low Low	Insignificant/ Moderate	Atmospheres with low level of pollution. Mostly rural areas.	Unheated buildings where condensation may occur, e.g. depots, sports halls.
M3	C3	Medium	Large	Urban and industrial atmospheres, moderate sulfur dioxide pollution. Coastal areas with low salinity.	Production rooms with high humidity and some air pollution, e.g. food-processing plants, laundries, breweries, dairies.
M3	C4	High	Large	Industrial areas and coastal areas with moderate salinity.	Chemical plants, swimming pools, coastal ship- and boatyards.
M4-A	C5-M	Very high - marine	Very large	Industrial areas with high humidity and aggressive atmosphere.	Buildings or areas with almost permanent condensation and with high pollution.
M4-B	C5-I	Very high - industrial	Very large	Coastal and offshore areas with high salinity.	Buildings or areas with almost permanent condensation and with high pollution.

Source: Corrosivity categories acc. to SS-EN ISO 12944-2.

## Acceptable protections against corrosion for fasteners in concrete

## Safety classes

Environment-/ Corrosivity classes according to BSK 1:23	Safety class		
	1	2	3
M0/C1	-	-	-
M1/C2	Fe/Zn 12	Fe/Zn 25	Fe/Zn 25
M2/C2	Fe/Zn 25	Fe/Zn 45 <sup>a)</sup> e)	Fe/Zn 45 <sup>a)</sup> e)
M3/C3, C4	Fe/Zn 45 <sup>a)</sup> b)e)	Stainless <sup>c)</sup>	Acid-proof <sup>d)</sup>
M4A+M4B/ C5-M+C5-I	Acid-proof <sup>d)</sup>	Acid-proof <sup>d)</sup>	Acid-proof <sup>d)</sup>

a) Alt. stainless.

b) Not suitable in heavy industrial atmosphere.

c) Stainless quality concern screws made of steel from group A2 according to standard SS-ISO 3506.

d) Acid-proof quality concern screws made of steel from group A4 according to standard SS-ISO 3506.

e) Concern fasteners with dimensions M10 or larger.

### Examples of safety classes

As an example of assemblage which is related to a certain safety class it could be mentioned:

**Safety class 1** Attachments of installations (for example ventilation and cable ducts), external wall panels with small heights (for example cavity walls up to 3,5 m above ground), light-weight false ceilings (for example light-weight sound absorbing material). Joints that are used only to fix a position.

**Safety class 2** Attachments of external wall constructions (for example concrete panels and cavity walls), roofs, false ceilings. Bedding of columns or other stabilising construction parts.

**Safety class 3** A building's supporting framework, and also the construction parts that are necessary for the stability of the system. Stairs and other construction parts that are parts of the building's emergency exits. Railings on stands and similar constructions in combination with considerable heights, where a large number of persons are located. Beams for bays. Building hoists.