Material compatibility and galvanic corrosion[1)]

		Material for fasteners and fixing elements						
Ambient condition (Acts as an electrolyte)	**Material Head or construction material**	**Bare copper**	**Tinned copper**	**Stainless steel inox A2**	**Stainless steel inox A4**	**Galvanized steel**	**Bright steel**	**Aluminium**
In air (facade sheets, lightning conductor, arrester)	Bare copper	OK	X	X	X			
	Tinned copper	X	OK	X	X	X		X
	Copper-titanium-zinc		X	X	X	OK		X
	Galvanized steel		X	X	X	OK		X
	Stainless steel (inox A2) [2)]	X	X	OK	OK	X		OK
	Aluminium		X	OK	OK	X		OK
In soil [3)] (Ring, radiation and deep earthing)	Bare copper	OK	X		X			
	Stainless steel(inox A4) [2)]	X	X		OK			
In concrete [4)] (Foundation)	Bare or galvanized steel	X	X	X	X	OK	OK	
	Bare copper	OK	X	X	X	X	X	

Legend for the determination of the material for fasteners and fixing elements.

OK = optimal X = usable = not permitted / not recommended

[1)] **Contact corrosion.** Galvanic corrosion occurs at the contact surface between different metals and under the influence of moisture (Electrolyte). By following the recommendation on compatibility,contact corrosion can be avoided.

[2)] **Conductivity of stainless steel (Inox).** Stainless steel has approximately 40 times less conductivity than copper.

[3)] **Grounding in the soil.** Copper material is preferred as grounding material (SNR 464022, Table 5.2.2.1) (SEV – Switzerland only).

[4)] **Grounding in concrete (foundation).** Steel ground wire and blank galvanized steel must be completely cast in concrete (minimum concrete cover 50 mm). Connections to the foundation grounding must be made of corrosion-resistant material (eg stainless steel / Inox A4 running).

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