

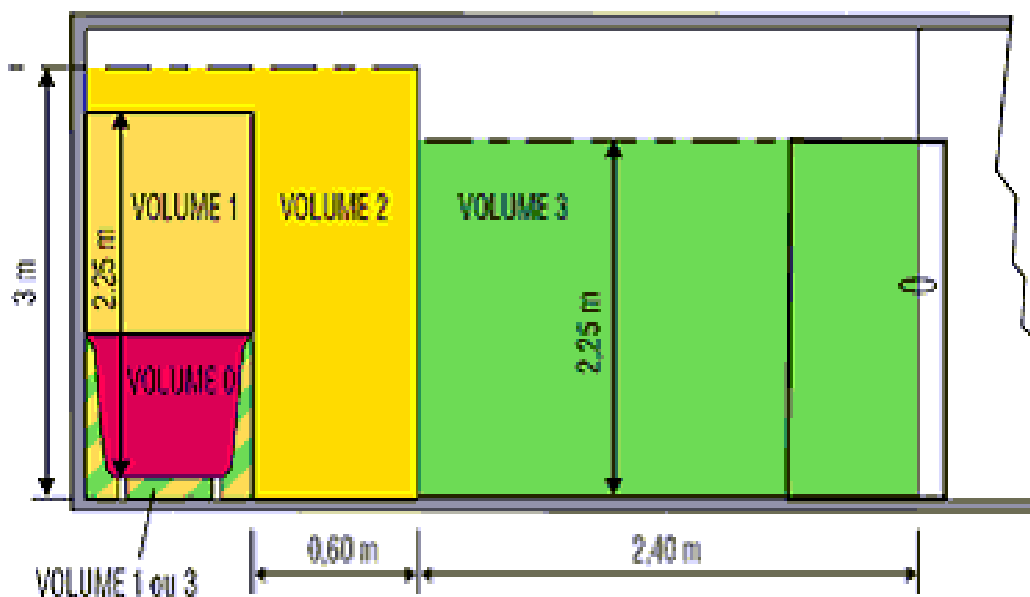
Electrical Installations in rooms containing a bath or shower

Choice of Materials

All the circuits serving a room containing a bath or shower must be protected by one or more residual current devices with a sensitivity of 30 mA, except for circuits of extra low voltage (limited to 12 volts in the rooms where there is a bath or shower) or fed from an isolating transformer.

Respect the volumes or areas of security

The shower room or bathroom is divided into four volumes, or areas, each volume or area has different levels of security or protection to be observed. It is logical, the closer you get to the shower or bath the greater the risk of a shock, and therefore the greater the level of protection needed.



Volume 0: The shower tray or bath

All electrical equipment (hair drier, electric razor, mobile phone, etc.) is forbidden.

Volume 1: Above the shower tray or bath

Neither lights nor switches are allowed unless they are fed from an isolation transformer, and these electrical appliances must carry mark NF and are protected from ingress of water.

Volume 2: 60 cm around the shower tray or bath






For this area all the electrical materials, water heaters and lights must be constructed with double insulation class II (no earth required), and carry the NF marking, and be protected against the rain (IP 23 minimum), except for electric razors fed from a shaver socket that includes a mains isolating transformer.

Volume 3 : more that 60 cm from the shower tray or bath

For this last area electrical equipment constructed to class I is permitted (i.e. requiring an earth), the sockets in this area, and the junction boxes must carry the NF mark and be protected from vertical water penetration (or IPX 1).

Finally, if it is not possible to place it elsewhere, the hot water tank can be installed in volumes 1 & 2 but they must be :

1. Fed from a 230v supply.
2. If it is a storage type tank it must be of the horizontal type, placed as high as possible.
3. The pipes must be of metal construction, and
4. The circuit feeding the hot water tank must be protected by a residual current device with a sensitivity of **less** than 30 mA.

Area	IP Rating	Appliances	Lights
Outside Volume 3	20 or X0B	No symbol	No symbol
Volume 3	21 or X1B		
Volume 2	23 or X3B	No symbol	
Volume 1	24 or X4B		
Volume 0	27 or X7B	