

Table 8: Zone classification and equipment assignment according to their category or EPL protection level

	Zone	Duration of the presence of an explosive atmosphere	Equipment category	Equipment protection level (EPL):
Gases, vapours, mist	0	Constant, long-term, persistent	1G	Ga
	1	Occasionally	2G	Gb
	2	Rarely	3G	Gc
Dust	20	Constant, long-term, persistent	1D	Da
	21	Occasionally	2D	Db
	22	Rarely	3D	Dc

3.1 ZONE CLASSIFICATION

Hazardous areas are classified into zones to facilitate the selection of appropriate electrical apparatus as well as the design of suitable electrical installations. Zone classification reflects the likelihood of the occurrence of an explosive atmosphere (see Table 7).

Information and stipulations on zone classification can be found in IEC 60079-10-1 for gas explosion hazardous areas or in IEC 60079-10-2 for areas with combustible dust. There are also industry codes and national standards providing guidance or examples for area classification (see Annex K of IEC 60079-10-1).

The maximum risk potential has to be taken into account when classifying the hazardous areas into zones and determining the necessary protective measures. If there is no expert available in the company to assess the risk of explosion and determine the necessary measures, the advice of a competent authority should be sought.

The equipment used in the defined hazardous zone must meet the requirements of the respectively assigned equipment category or equipment protection level. An overview of the zone classification and assignment of equipment according to their category is illustrated in Table 8.