

### Labelling of explosion proof equipment according to ATEX 2014/34/EU

#### Classification and labelling of hazardous locations

Flammable medium	Hazardous locations Probability of a potentially explosive atmosphere occurring	Classification of hazardous locations	Product classification		Equipment protection level (EPL)
			Product group	Product category	
Gases, mists, vapours	Continuously, for long periods or frequently	Zone 0	II		
	Likely to occur	Zone 1	II	1G	Ga
	Infrequently and for short periods only	Zone 2	II		2G
Dusts	Continuously, for long periods or frequently	Zone 20	II		
	Likely to occur	Zone 21	II	1D	Da
	Infrequently and for short periods only	Zone 22	II		2D

#### Classification Explosion groups & Temperature classes

Explosion group	Examples depending on				
	- explosion group		- temperature class		
IIA	IIB	IIC	Ammonia	Ethanol	Petrol
			Methane	Cyclohexene	Diesel fuel
			Ethane	n-Butane	Fuel oil
			Propane		n-Hexane
			City gas	Ethylene	Ethyl glycol
			Acrylic nitrile	oxide	Carbon hydrogen
			Hydrogen	Acetylene	
					Carbon disulphide

  

Temperature class	Attention: this list is only an extract of possible flammable mediums and does not claim to be complete!
T1 < 450°C	
T2 < 300°C	
T3 < 200°C	
T4 < 135°C	
T5 < 100°C	
T6 < 85°C	

Product use depending on temperature class (T1 - T6). The temperature class indicates the max. temperature of the exposed surface of the product. For dust explosion proof, the max. surface temperature is directly shown (e.g. T80°C).

#### Notified bodies

Code number	Notified Body (NB)
0102	PTB (Germany)
0158	EXAM (Germany)

Example:



**II 2 G Ex db IIC T6 Gb NB 12 ATEX 1007 X**  
**II 2 D Ex tb IIIC T80°C Db**

Protection principle	Type of protection	Code	Sym- bol	To use in zone	CENELEC
Prevents transmission of the explosion outside	flameproof enclosure	Exd da db dc	★	0,1,2 1,2 2	EN 60079-1
Prevents high temperatures and sparks	increased safety	Exe eb ec	⊗	1,2 2	EN 60079-7
Low current / voltage supply	intrinsic safety	Exi ia ib ic	⊕	0,1,2,20,21,22 1,2,21,22 2,22	EN 60079-11
Positive pressure device	pressurised apparatus	Exp pxb pyb pzc	⊕	1,2,21,22 1,2,21,22 2,22	EN 60079-2
Encapsulated	moulding	Exm ma mb mc	★	0,1,2,20,21,22 1,2,21,22 2,22	EN 60079-18
Parts immersed in oil to isolate from explosive atmosphere	oil immersion	Exo ob oc	★	1,2 2	EN 60079-6
Prevents transmission of explosion outside	powder filling	Exq qb	★	1,2	EN 60079-5
As above, but for use in zone 2	protection "n"	Exn nC nR	⊗	2 2	EN 60079-15
Dust explosion proof	protection by enclosure	Ext ta tb tc	★ IP66	20,21,22 21,22 22	EN 60079-31

Protection principle – Type of protection – EN 60079-0 General Requirements

Code	Dust classification
IIIA	flammable fibres
IIB	non conductive dust
IIC	conductive dust
8	–
7	–
6	totally protected against dust
5	dust - limited ingress
4	solids objects > 1 mm
3	solids objects > 2,5 mm
2	solids objects > 12,5 mm
1	solids objects > 50 mm
0	no protection

  

IP	Protection against solids/dust	Protection against water
8	–	long periods of immersion
7	–	the effects of temporary immersion
6	totally protected against dust	strong jets of water
5	dust - limited ingress	low pressure jets from all directions
4	solids objects > 1 mm	sprays from all directions
3	solids objects > 2,5 mm	direct sprays up to 60° from vertical
2	solids objects > 12,5 mm	direct sprays up to 15° from vertical
1	solids objects > 50 mm	vertical falling drops of water
0	no protection	no protection

Ingress Protection EN 60529

Application	Code
For common use	–
For use under special conditions	X
This part is an Ex component and certified as such and is therefore not suitable for use on its own	U
CE conformity is achieved by incorporation into equipment	

Further information

