

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

Classification and labelling of hazardous locations

Classification Explosion groups & Temperature classes

Flammable medium	Hazardous locations Probability of a potentially explosive atmosphere occurring	Classification of hazardous locations	Product classification		Equipment protection level (EPL)	Explosion group	Examples depending on				
			Product group	Product category			- explosion group - temperature class				
Gases, mists, vapours	Continuously, for long periods or frequently	Zone 0	II			IIA IIB IIC	Ammonia	Ethanol	Petrol	Acetal-dehyde	
	Likely to occur	Zone 1	II	1G	Ga		Methane	Cyclohexene	Diesel fuel		
	Infrequently and for short periods only	Zone 2	II		2G		Gb	Ethane	n-Butane	Fuel oil	Ethyl ether
Dusts	Continuously, for long periods or frequently	Zone 20	II			IIC	Propane		n-Hexane	Carbon hydrogen	
	Likely to occur	Zone 21	II	1D	Da		City gas	Ethylene oxide	Ethyl glycol		
	Infrequently and for short periods only	Zone 22	II		2D		Db	Acrylic nitrile	Carbon hydrogen		
				3G	Gc	Hydrogen	Acetylene			Carbon disulphide	
				3D	Dc						

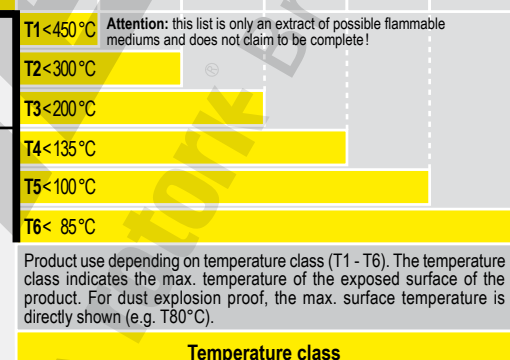
Notified bodies

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	Symbol	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

Code	Dust classification
IIIA	flammable fibres
IIB	non conductive dust
IIC	conductive dust

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

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	

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

Ingress Protection EN 60529

Further information

