

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



DRYFAST
INDUSTRIAL

Classification and labelling of hazardous locations

Flammable medium	Hazardous locations where risk of a possible explosive atmosphere may arise	Classification of hazardous locations	Product classification		Equipment protection level (EPL)
			Product group	Product category	
Gases, mists, vapours	Explosive atmosphere is present continuously, for long periods or frequently	Zone 0	II		
	Explosive atmospheres are, in normal operation, to be expected occasionally	Zone 1	II	1G	Ga
	Explosive atmosphere is unlikely in normal operation	Zone 2	II	2G	Gb
Dust	Explosive atmosphere is present continuously, for long periods or frequently	Zone 20	II		
	Explosive atmospheres are, in normal operation, to be expected occasionally	Zone 21	II	1D	Da
	Explosive atmosphere is unlikely in normal operation	Zone 22	II	2D	Db

Notified bodies

Code number	Notified body (NoBo)
0102	PTB (Germany)
0158	EXAM (Germany)

Example:



II 2 G
II 2 D

Ex db
Ex tb

IIC
IIIC

T6
T80 °C

Gb
Db

NB 12 ATEX 1007 X

Classification Explosion groups and temperature classes

Explosion group	Examples depend on - explosion group - temperature class					
IIA	Propane	Ethanol	Kerosine	Petroleum	Acetaldehyde	
	Acetone	n-Butane	Diesel oil	n-Hexane		
IIB	Methanol	Cyclohexene				
	Ammonia					
IIC	Coal gas	Ethylene	Ethyl glycol			
	Carbon-monoxide	Ethylene oxide	Carbon hydrogen	Ethyl ether		
	Acrylonitrile	Propylene oxide				
	Hydrogen	Acetylene				Carbon disulphide

T1 < 450°C Please note that this list is only an extract of potentially flammable mediums and does not claim to be complete!

T2 < 300°C

T3 < 200°C

T4 < 135°C

T5 < 100°C

T6 < 85°C

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

Temperature class

Protection of equipment by flameproof enclosure	"d"	Exd	da db dc		0, 1, 2 1, 2 2	EN 60079-1
Protection of equipment through increased safety	"e"	Exe	eb ec		1, 2 2	EN 60079-7
Protection of equipment by intrinsic safety	"i"	Exi	ia ib ic		0, 1, 2, 20, 21, 22 1, 2, 21, 22 2, 22	EN 60079-11
Protection of equipment by internal overpressure	"p"	Exp	pxb pyb pzc		1, 2, 21, 22 1, 2, 21, 22 2, 22	EN 60079-2
Protection of equipment by encapsulated moulding	"m"	Exm	ma mb mc		0, 1, 2, 20, 21, 22 1, 2, 21, 22 2, 22	EN 60079-18
Protection of equipment by oil immersion	"o"	Exo	ob oc		1, 2 2	EN 60079-6
Protection of equipment by powder filling	"q"	Exq	qb		1, 2	EN 60079-5
Protection of equipment by security (non-sparking)	"n"	Exn	nC nR		2 2	EN 60079-15
Protection of material against dust ignition by enclosure	"t"	Ext	ta tb tc		20, 21, 22 21, 22 22	EN 60079-31
Protection principle	Type of protection	Code	Symbol	For use in zone	CENELEC	

Protection principle - Protection type - EN 60079-0 General requirements

IIIA	flammable fibres		
IIIB	non conductive dust		
IIIC	conductive dust		
Code	Dust classification		
8	Pressure-waterproof		
7	Waterproof up to 1m deep		
6	Dustproof	Waterproof	
5	Protection against dust	Low pressure jets from all directions	
4	Solid objects > 1 mm	Sprays from all directions	
3	Solid objects > 2,5 mm	Rainproof	
2	Solid objects > 12,5 mm	Direct sprays up to 15°	
1	Solid objects > 50 mm	Vertical falling drops of water	
0	No protection	No protection	
IP	Protection against solids / dust	Protection against water	Application
			Code

Ingress protection EN 60529

Further information

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