

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 Gb |
| | Infrequently and for short periods only | Zone 2 | II | 2G 3G | Gc |
| Dusts, | Continuously, for long periods or frequently | Zone 20 | II | | |
| | Likely to occur | Zone 21 | II | 1D 2D | Da Db |
| | Infrequently and for short periods only | Zone 22 | II | 3D | Dc |

Classification Explosion groups & Temperature classes

| Explosion group | Examples depending on - explosion group - temperature class | | | | | |
|--|---|-----------|-----------------|-------------|--|-------------------|
| IIA | Ammonia | Ethanol | Petrol | Acetal-de- | | |
| IIB | Methane | Cyclohe- | Diesel fuel | hyde | | |
| IIC | Ethane | xene | Fuel oil | | | |
| | Propane | n-Butane | n-Hexane | | | |
| | City gas | Ethylene | Ethyl glycol | Ethyl ether | | |
| | Acrylic nitrile | oxide | Carbon hydrogen | | | |
| | Hydrogen | Acetylene | | | | Carbon disulphide |
| T1 < 450°C Attention: this list is only an extract of possible 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 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). | | | | | | |
| Temperature class | | | | | | |










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

Example:



0158

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

| | | | | | | |
|--|-------------------------|------|-------------|---|-------------------------------------|-------------|
| 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 pzb |  | 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 |  | 20,21,22 21,22 22 | EN 60079-31 |
| Protection principle | Type of protection | Code | Sym- bol | To use in zone | CENELEC | |

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

| | |
|------|---------------------|
| IIIA | flammable fibres |
| IIIB | non conductive dust |
| IIIC | conductive dust |
| Code | Dust classification |

| | | |
|----|--------------------------------|---------------------------------------|
| 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 |
| IP | Protection against solids/dust | Protection against water |

Ingress Protection EN 60529

| | |
|---|------|
| 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 | |
| Application | Code |

Further information