



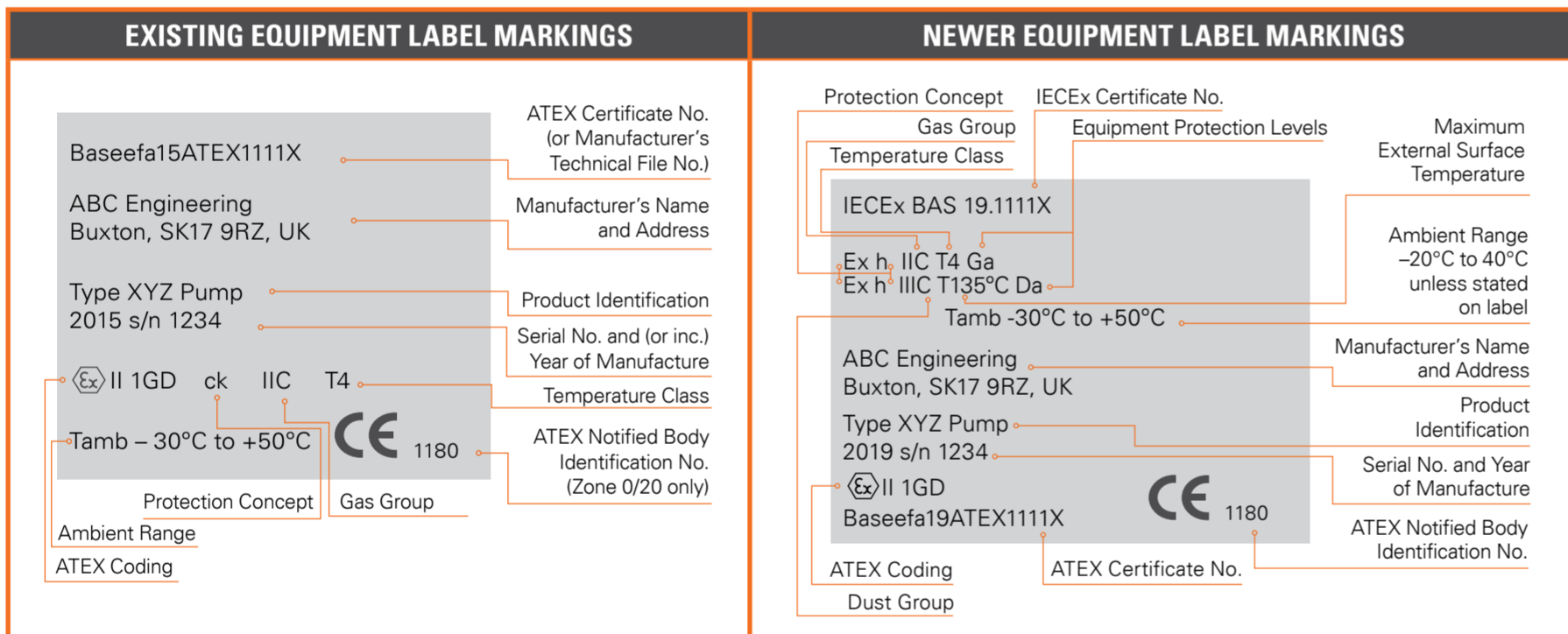
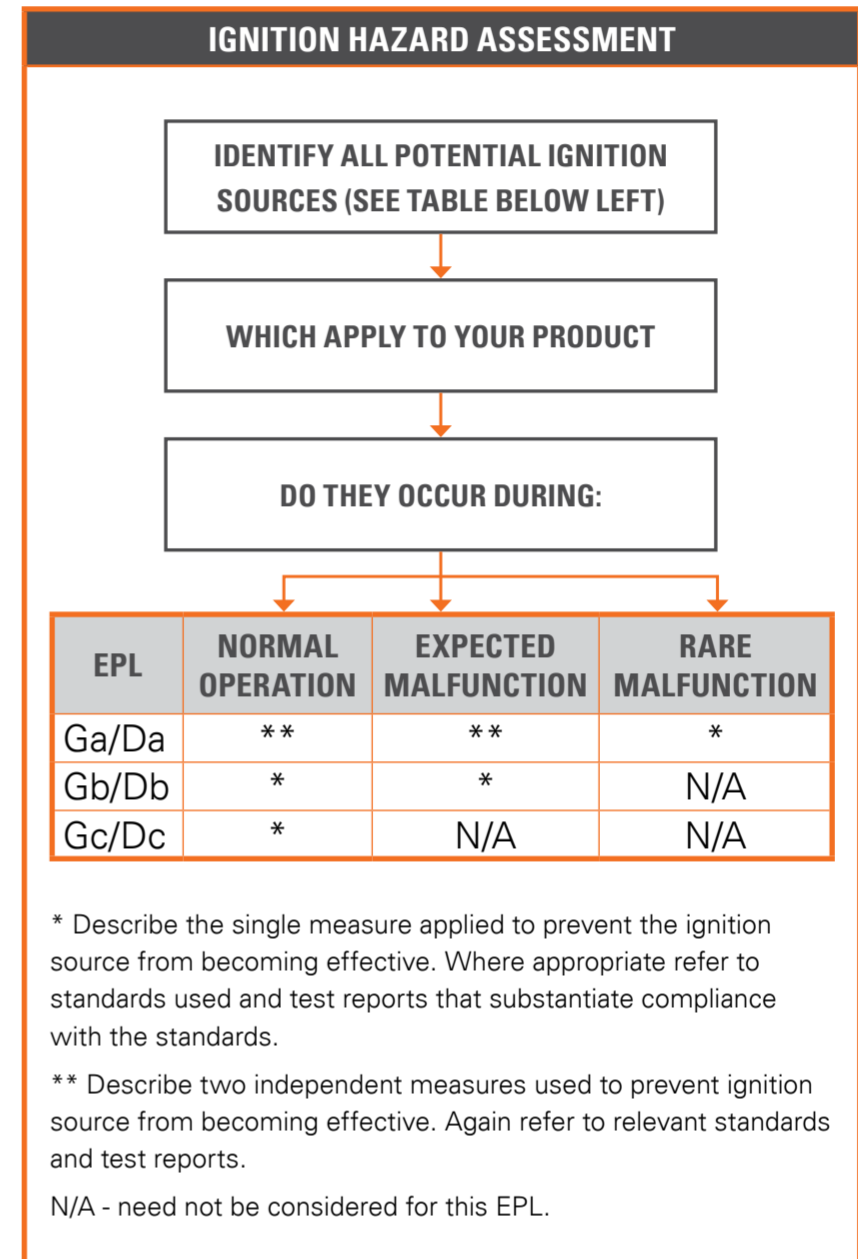
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NON-ELECTRICAL EQUIPMENT: GUIDANCE FOR MANUFACTURERS AND END USERS TO BE USED IN CONJUNCTION WITH WALLCHART 1



| ATEX RESPONSIBILITY NB – Notified Body M – Manufacturer | | ATEX EQUIPMENT CATEGORY | HAZARDOUS AREA ZONE | | EQUIPMENT PROTECTION LEVEL (EPL) | | IECEX RESPONSIBILITY CB – Certification Body | |
|---|------------|-------------------------|---------------------|------|----------------------------------|------|---|------------|
| TYPE EXAMINATION | PRODUCTION | | GAS | DUST | GAS | DUST | TYPE EXAMINATION | PRODUCTION |
| NB | NB | 1 | 0 | 20 | Ga | Da | CB | CB |
| M <small>Technical File stored with NB</small> | M | 2 | 1 | 21 | Gb | Db | CB | CB |
| M | M | 3 | 2 | 22 | Gc | Dc | CB | CB |

| NON-ELECTRICAL PROTECTION CONCEPTS | | | | | | | | | | | | |
|---|------|------|------|------|------|--------------------------------|---------------------|--------|------|----------|------|------|
| SUPERSEDED EUROPEAN STANDARDS | | | | | | NEW ISO/IEC/EUROPEAN STANDARDS | | | | | | |
| STANDARD EN | | CODE | | ZONE | | PROTECTION CONCEPT | STANDARD ISO/IEC/EN | | CODE | | ZONE | |
| Gas | Dust | Gas | Dust | Gas | Dust | | Gas | Dust | Gas | Dust | Gas | Dust |
| 13463-1 | | | | | | General requirements | 80079-36 | | Ex h | | | |
| 13463-2 | | fr | fr | 2 | 22 | Flow restriction | Not applicable | | | | | |
| 13463-3 | | d | d | 1 | 21 | Flameproof | 60079-1 | Ex db | | 1 | | |
| | | | | 2 | 22 | | | Ex dc | | 2 | | |
| 13463-7 <small>(never published)</small> | | | | | | Pressurized | 60079-2 | Ex pxb | | 1 | | |
| | | | | | | | | Ex pyb | | 1 | | |
| | | | | | | | | Ex pzb | | 1 | | |
| | | | | | | | | Ex pzc | | 2 | | |
| | | | | | | Protection by enclosure | 60079-31 | Ex ta | | 20 | | |
| | | | | | | | | Ex tb | | 21 | | |
| | | | | | | | | Ex tc | | 22 | | |
| 13463-5 | | c | | 1 | 21 | Constructional safety | 80079-37 | Ex h | | 1 | | |
| | | | | 2 | 22 | | | Ex h | | 2 | | |
| 13463-6 | | b | | 1 | 21 | Control of ignition sources | 80079-37 | Ex h | | 1 | | |
| | | | | 2 | 22 | | | Ex h | | 2 | | |
| 13463-8 | | k | | 1 | 21 | Liquid immersion | 80079-37 | Ex h | | 1 | | |
| | | | | 2 | 22 | | | Ex h | | 2 | | |
| | | | | | | Mining equipment | 80079-38 | Ex h | | (EPL Mb) | | |



| SINGLE IMPACT ENERGY LIMITS (Nm) | | | |
|----------------------------------|-----------------|---------------------|--|
| | EXPLOSION GROUP | NON-SPARKING METALS | OTHER MATERIALS (*) |
| GAS | | | |
| Ga | IIC | 60 | 5 (Hydrogen) 3 (Hydrocarbons including acetylene) |
| | IIB | 125 | 10 |
| | IIA | 125 | 20 |
| Gb | IIC | 125 | 10 |
| | IIB | 250 | 20 |
| Gc | IIA | 500 | 40 |
| | IIC | 250 | 20 |
| Gc | IIB | 500 | 40 |
| | IIA | 500 | 80 |
| DUST | | | |
| Da | IIIA to IIIC | 125 | 20 |
| Db | IIIA to IIIC | 500 | 80 |
| Dc | IIIA to IIIC | 500 | 80 |

(*) excluding materials specified in cl.6.4.2.1 a) of ISO 80079-36

| POSSIBLE IGNITION SOURCES (LIST FROM EN 1127-1) | |
|---|--------------------------|
| Hot surfaces | Lightning |
| Mechanical sparks | Electromagnetic waves |
| Flames and hot gases | Ionizing radiation |
| Electrical sparks | High frequency radiation |
| Stray electric currents and cathodic protection | Ultrasonics |
| | Adiabatic compression |
| Static electricity | Chemical reaction |

| TECHNICAL FILE CONTENTS |
|--|
| General description |
| Ignition risk assessment |
| Design and manufacturing drawings |
| Description and explanation necessary to understand operation of product |
| Standards assessment (or other solutions to meet EHSRs for ATEX) |
| Calculations and examinations |
| Test results |

| SGS BASEEFA SERVICES |
|---|
| <ul style="list-style-type: none"> ATEX and IECEx equipment/component certification IECEX certificate of personnel competence IEC 61508 certification Quality system approval Assistance with DSEAR (ATEX user directive) implementation Training and technical advice IECEX service facility certification Technical file storage Testing |

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|--|
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